THE AMERICAN JOURNAL OF
CLINICAL MEDICINE

Vol. 30, No. 7 JULY, 1923

Renaissance

IF you're sick of sham and social syncopation,
If you can't quite stomach Mammon as YOUR God,
Pack up your traps and take a long vacation
With some kindred soul, canoe and casting rod.

THERE'S rejuvenation in the forest reaches,
There is Peace for troubled souls in White-Birch glade,
And the glory of each dawn and evening teaches
"God's on His Throne: Be still and unafraid."

TAKE your woes to Mother Earth and she will heal you;
Sink to sleep, as infants sleep, on balsam bough.
Wash your Soul—let Nature reanneal you;
"Hit the Trail" and sense the Resurrection NOW!

C. H. C.

July, 1923.

COLONEL JAMES D. FIFE

The American Journal of
CLINICAL MEDICINE
Dependable Therapeutic Fact for Daily Use

Vol. 30, No. 7 JULY, 1923

Colonel James D. Fife

COLONEL James D. Fife was born on June 26, 1874, in Virginia, and was graduated in medicine, when about twenty-three years old, from the medical department of the University of Virginia.

For a few years, he was engaged in civil practice, but, in October of 1902, he did what a good many of the aristocratic young men of his state have done in the past—they yielded to the call of the military colors, and the subject of our sketch received his commission as a first lieutenant in the medical corps of the regular army, having passed the prescribed educational and professional examinations.

After the obligatory course of instruction in the Army Medical School, from which he was graduated with high marks, he entered on an active medico-military career, both in the United States and the Philippines, performing the usual tasks of subaltern medical officers in hospitals, in the field and in garrison.

After five years of service, he was promoted to the grade of captain and, on the first of July, 1916, he was advanced to field rank.

In less than a year, shortly after the United States became a participant in the World War, he was again promoted, to the grade of lieutenant colonel and, in January of the following year, he attained the grade of colonel.

Colonel Fife was sent overseas very early, his first service being as commanding officer of a base hospital which had been raised and organized in St. Louis, Mo. This unit, which was composed almost exclusively of officers and men without previous military training, was brought to a high grade of efficiency, so that the service which it rendered to its many wounded was of the highest character. In accord with the policy of the War Department, to utilize the trained regular army medical officers for important administrative and tactical tasks of responsibility, Colonel Fife was relieved from command of the base hospital, and ordered to duty with the Chief Surgeon of the American Expeditionary Forces. He was detailed at these headquarters to the hospitalization division. His task was simple—all he had to do was to produce bed capacity for the sick, injured and wounded of the American Army in France.

What this task actually amounted to, space forbids to narrate, and our readers are referred to preceding issues containing the memoirs of our Dr. Blech in the World War. Suffice it here to say that the task was a gigantic one, and it reflects glory on our regular army medical corps that, irrespective of the huge number of casualties sustained by

our forces overseas, there was at no time a serious inadequacy of shelter of excellent quality or a lack of professional personnel and equipment, all of which could favorably measure up with any well-appointed civilian hospital working under normal conditions.

While it can be easily conceived that this was not a one man's job, Colonel Fife played a tremendously important role in the achievement of this almost superhuman task, and we have it from many reliable sources that he accomplished what he set out to do by firmness, devotion to duty, tireless energy, setting an inspiring example to all medical officers with whom he came in official contact. Yet, in spite of his great authority and despite many anxieties and vexations, he never misused his powers, but treated everybody, no matter how lowly in military rank, with kindness and courtesy; factors which stimulated all to give the very best in them to the service, even to the extent of great personal sacrifices. Colonel Fife has received a number of important foreign decorations, including that of the Legion of Honor. Yet, as may be seen on the accompanying frontispiece, the Distinguished Service Medal, bestowed upon him comparatively early during the war, in recognition of his stupendous services, occupies the place nearest his heart.

Colonel Fife has now another task which, in many respects, is as important as, if not more so than, that performed during the war. He is assigned to duty in the office of the Secretary of War and one of his duties is the organization of a service that will utilize our national industrial and manufacturing resources for the purpose of insuring immediate and adequate supply of all material wants of a huge army, in the event of another war.

Preparedness is not only a good preventative of war but it is prognostically a favorable assurance of the outcome of war, should another one be forced upon us. If this were to occur within a decade or two, the fruits of Colonel Fife's labors will be ours. The medical profession has reason to be proud of the type of our medical officers that he represents.

Time must not be counted by calendars, but by sensations, by thought.

TOO MANY DOCTORS—OR TOO FEW?

Since the population of the United States has changed in character, in so far as the agricultural population diminished numerically, while the industrial (that is to say, the workers in factories and manufacturing centers) increased, the problem of distribution has become a very difficult one in many directions. Strange as it may seem, it even affects the medical profession and, according to localities, we are told that the medical profession is overcrowded and again that there is a serious and alarming dearth of medical men.

Regarding the latter, a clipping from the *Louisville* (Ky.) *Post* recently came to our attention in which there was a correspondence calling attention to the shortage of doctors that is facing the people of Kentucky and more especially eastern Kentucky.

"Five years ago," the correspondent says, "I moved to Spencer County from Estell County, and, about eight years ago (or about the time that the law was changed requiring more qualifications before entering medical schools on the part of the student), I remarked that there would never be another doctor in eastern Kentucky." "And," he continues, "from that day to this, I have never heard of anyone from up there entering medical college, although I have made diligent inquiry. Those people can not give their children high school, then two years in college and then six years in medical school. Of course, there is something to be said for qualifications, but we had better have for future generations the same kind of doctors that we have now than to have nothing at all. Those we have now went to medical school four years, of six months each year, and that gave teachers a show to be doctors."

Commenting upon this correspondence, the editor concedes that there is a shortage of doctors all over the country districts in Kentucky, and he admits that it presents a very serious situation. Indeed, he has been informed that

"there is one county in Kentucky that has not a single doctor, while many counties are insufficiently supplied. Moreover, the situation is getting worse instead of better. The older men are getting older and the young men, after spending or borrowing money for a long and expensive medical education are simply forced to settle somewhere where financial returns may reasonably be expected to be prompt."

The crux of the question seems to lie in the concluding remarks. The suggestion tending to lower the qualifications for admission to the medical school and also for admission to licensure are not well taken, we believe. It would be a serious mistake, in our opinion, to retrogress and to lower the educational requirements. Ways and means should be found to supply mountain districts and country districts with medical service by a more equable system of distribution. It is by no means only the state of Kentucky in which there exists a dearth of doctors. The same complaint comes

from some districts of Tennessee, of South Carolina and of other states.

It is undoubtedly true that, under present-day conditions, the acquiring of a medical education is unduly expensive. Not only does the high cost of living persist, but the time required to complete a course of medical study and to round it out by the obligatory year in the hospital is now longer than it has ever been before. Under these circumstances, the student whose means are seriously limited, or who is obliged to earn at least part of his living expenses, is gravely handicapped. Most young graduates, we apprehend, are more or less in debt when they receive their diplomas and, as the editor of the *Louisville Post* says, are simply forced to settle somewhere where financial returns may reasonably be expected to be prompt.

It seems as though we had arrived at an *impasse* for which a solution is difficult to find. As already said (and we have made the same remarks before now), we do not believe that it would be wise to lower the educational qualifications or to shorten the prescribed period of the medical curriculum.

Still, one might think of a way through which, after four years of study, students would be granted a license to practice as general practitioners, after having complied with certain minimal requirements, while those who desired to enter a specialty, including surgery, or to adopt an academic career or to devote themselves to research work, would be obliged to spend an additional two, three or more years in college before they could go up for certain supplementary or additional degrees.

It is true that it would not be sufficient for the general practitioner to learn the "rudiments" only of the medical sciences. Even he should be thoroughly trained in the fundamentals and in the clinical branches. Nevertheless, it can not be denied that there are certain studies of which but little sticks in the minds of the graduates, those excepted who follow on in the same directions and give special attention and special study to these branches of the medical sciences. It may be recalled that, in some other countries, license to practice is given often without a medical degree, simply on the result of a final examination. The additional study and work for the degree, for preparation for surgery and the specialties, and for advanced or special investigations are not obligatory and are undertaken only by relatively few men.

While the foregoing presents suggestions that might possibly be developed and worked out into a new system of medical licensure, it would require time. Yet, life is short, as has been remarked before now.

—

We believe that there is available a means for solving the existing difficulties by taking steps to bring about a better distribution of physicians. All too many young graduates are tempted by the proximity of dispensaries and clinics, by the conveniences and fellowships of the cities and by the relatively easy work of city practice, which, moreover, brings better financial returns, at least in some districts of each city. Nevertheless, when it comes to actual poor-practice, in tenement districts, and even in the suburban districts inhabited by the smaller wage workers, the financial returns are small enough and the work is sufficiently exhausting to make many a city physician wish that he might be in more pleasant surroundings.

Surely, there are numbers of young medical men to be found in every city whom it would not be difficult to induce to change their locations, even if it were a question of moving to country districts where the emoluments would be slight financially, while the returns, consisting in experience, in excellent work to be done, in the affection and esteem of the people and in many other ways, would be great. There would be required a sort of clearing house through which localities in need of medical men could be supplied, while city physicians willing to move to country localities could have their attention called to existing opportunities.

It is true today, as it was a generation ago, that no better apprenticeship can be served by one wishing to become a PHYSICIAN than a period (five or ten years) of practice in the country. There are few, very few, young graduates who are physicians when they have acquired their doctor degree. Physicians are not manufactured or produced in schools. There they make doctors of medicine. Physicians are the result of development. They *become* such through hard work, through many failures and disappointments no less than through successes. They must pass through physical, mental and spiritual tribulations and trials; they must develop their own human nature through contact with others, such as it is possible especially in the country districts where people live closer to nature, lead simpler, less artificial lives, where it sometimes seems to us they are more human

than they are in the cities.

The physician, then, is the result of years of work, of study, of human experience, human suffering; his best nursery places have always been found in the country among the poor rather than in the hospital, in the dispensary or in the city.

Now, if ways could be found through which those young doctors of medicine, who really want to become physicians, might have it made possible for them to be established in districts where medical service is urgently needed, they might spend a period of five or ten years in country service and then, again through some clearing house, return to cities or perhaps become associated with medical schools or hospitals, not only for more advanced work but for teaching. It must not be forgotten that James Mackenzie insists strongly upon the utter dependence of real medical progress upon the work of the general practitioner. If the young graduate, trained in medical investigation, be sent out to give the service that is needed by the people, he will by way of compensation have an opportunity to study disease in its very incipiency and may, in that way, follow Mackenzie's reasoning, may foster and promote the sum total of medical knowledge, affording much valuable material for further study and scientific investigation.

—

As to the ways and means that may have to be discovered for such clearing house service, we are thinking of an article that appeared in the *Dearborn Independent* for June 2, and in which "an experiment" is described that was recently made in Sharon, Kansas. It appears that this little town had no physician and wanted one. A former incumbent of the practice had left to do postgraduate work and then settled to practice in Wichita. One reason was, undoubtedly, that the financial returns from his practice in Sharon had not been sufficient.

Dr. E. S. Haworth finally was induced to return to Sharon by being guaranteed a definite minimum income. This came about through "the Sharon Health Association which has 204 members, a chairman, secretary, treasurer and board of directors. The dues are $15 a year. In return for the payment of dues, the members get medical attention without charge. Of the 204 members, more than 180 have had the influenza in the last few months. Their doctor bills would have mounted to more than the dues.

"The dues are paid at the rate of $7.50 in advance, every six months The officials pay the doctor a salary of $250 a month. He provides a motor car and buys the oil and gasoline. In case the roads become impassable for motor cars, the patient must provide transportation. The doctor also is given, free, a telephone, an office, light and fuel.

"Calls to all members living within six miles of the town are made without charge. Outside that zone, a charge of $1 a mile from the zone boundaries is made. Obstetrical cases pay an additional fee of $10 which goes to the association. From that source, the money is obtained to pay office rent, and for fuel and light bills.

"Night calls are those made between 10 o'clock and 5 o'clock. For them, the members are charged one-half the rate fixed by the state medical association. In emergencies, however, like the influenza epidemic, when calls came so rapidly, the doctor worked late into the night making them, no extra charge is made. The physician is allowed to practice outside the association and the money thus obtained becomes his personal funds. If, however, a member of the association needs a physician while such outside calls are being made, the physician is liable for the fee of a neighboring doctor who may be called in.

"If hospital treatment is necessary, the doctor accompanies the patient to the hospital for expenses. Provision is made for calling other doctors in consultation.

"One result of the experiment at Sharon has been to do to medical treatment what the nation long has done with the schools. The member with few children or none has helped pay the doctor bill of the poorer family with many. The member with 10 children pays the same dues as the member with none. Children of the poor family get the same quality of treatment as those of the wealthier parents. Yet, the dues are not a burden on anyone.

"Another result has been, to put to work in practical fashion the principles of preventive medicine. When, under the old system of charging for every attention of the doctor, one of the children complained of a sore ear, it was given no treatment or a little sweet oil was poured into the ear at home. Now he goes to the doctor the first time he is in town. Thus a child may be saved the suffering and annoyance that goes with a running ear."

—

It is easy to see that such an arrangement possesses many advantages and relatively few disadvantages. The doctor is assured of a definite minimum income which may be increased through outside work. Except in periods of epidemics, he will have time for reading and study and it would be an easy matter to provide for an annual vacation by engaging a substitute.

On the part of the patients, as Doctor Haworth points out, they do not have to worry about the doctor's bill; nor do they fear that he is running up bills on them unduly. Commonly, they consult him at the first sign of anything wrong and, in that way, he is in a position to prevent much illness. Naturally,

it is to his interest as well as to theirs to get his patients well as quickly as possible and to have them stay well. It makes his work easier. A further benefit of the arrangement is, that the doctor is in a position to impose necessary provisions for the prevention of illness; in short, to teach the people the gospel of preventive medicine.

It seems to us that such an arrangement, with modifications as they may be called for, would work well in almost any circumscribed locality. If the people themselves could not afford even the small membership of the health association, the township or the county might provide the funds or, sometimes, some wealthy and public-spirited citizen might be willing to create an endowment fund.

Naturally, many details remain to be worked out. So far, the plan has worked exceedingly well in Sharon. Still, it is susceptible of improvement. The point is, that the community is well taken care of in its need for medical service and the local doctor does not need to worry about bad bills.

Under such circumstances, it would pay any young graduate well to spend a period of from five to ten years in country practice. After one lustrum (a five-year period), he should be obliged to spend one or two months in postgraduate work and this should be repeated every five years. The contracts might be made for periods of five years so that, at the end of any one term of service, the doctor might follow his inclination for special work, or city work, or for prolonged postgraduate study, if he so wished. There would be ample time to provide for a successor who could then take up the burden and assume the privileges.

Let us have a full discussion of this very important subject. Let us get down to brass tacks and talk fundamentals. The problem is not so much one of medical education, of lowered requirements, but, we are sure, one of distribution regulated by supply and demand. If the communities can be shown a way, after the example of Sharon, Kansas, how to secure a local physician, their commonsense and their practical good business sense will incline them to look upon it favorably, even though it constitutes an innovation and something that our fathers and grandfathers did not do.

The man who knows it can't be done counts the risk, not the reward.—Elbert Hubbard.

MOTHERS' HEALTH CLUBS

Somewhat belated, there came to us, through the courtesy of Dr. E. H. Pirkner, an article issued through the Health News Service from the State of New York Department of Health. It related to the commemoration of Mothers' Day and enjoined safeguarding motherhood as the best way in which to pay tribute to the mothers.

Reference is made to the work of the Division of Maternity, Infancy and Child Hygiene of the State Department of Health (New York), which is trying to help localities in their efforts to make motherhood safe. "It is important that every mother should be taught two things: First, to consult her physician early, and, second, how to keep herself well before she becomes a mother. In many parts of the state, Mothers' Health Clubs are being organized. These clubs are for the purpose of teaching women how to get ready to be mothers. The teaching is done by public-health nurses . . . "

So far, so good. Nobody could have any quarrel with a movement tending to bring about popular education in the hygiene of motherhood; for, the advantages of such a movement are self-evident. The State of New York and other states also are doing commendable work in this direction, and all states in the Union should imitate this splendid example.

Nor can objections be raised against the teaching being done by public health nurses who, of course, are specially instructed in the subjects that they are to teach. If they succeed in teaching every mother, first, to consult the physician early and, second, to keep herself well before she becomes a mother, much good will result. Unfortunately, public health nurses and other official nurses sometimes have a little habit of trying to eliminate the physician altogether and are prone to set themselves up as fully competent to give advice on any subject that might be presented. Manifestly, this is a serious mistake; the physician always should be the last authority in matters of health.

While the teaching of future mothers is an eminently proper humane and patriotic undertaking, it would be a mistake to assume that it has been inspired through the Sheppard-Towner Act and that nothing of the sort has ever been done before. We are informed that the New York State Legislature after all accepted the provisions of the Federal Act, although the state itself has done a great deal on its own initiative in the way of popular education and hygienic supervision. We doubt that the federal alleged assistance accruing through the provisions of

the Sheppard-Towner Act will improve matters or will bring about such improvement as could not have been materialized without the interference of the Central Government.

The important thing, it seems to us, is the instruction given to actual and future mothers and the assistance that has, for years, been offered to them, not only by state departments of health, but also in municipalities and in smaller circles.

A lot of us need to be protected by the rest of us from all of us.—Harold Bell Wright.

VICARIOUS MENSTRUATION

Reports of vicarious menstruation are published occasionally and cases are frequently diagnosed in that manner, for the simple reason that, during the time when unusual periodic attacks of bleeding occur, the regular flow of blood from the uterus is in abeyance. Gould and Pyle ("Anomalies and Curiosities of Medicine") speak of "vicarious, or compensatory, menstruation," citing numerous instances of bleeding from the skin, from the breasts, through the eyes, from the ears, from the mouth, from the extremities, through old ulcers, wounds or cicatrices, by the rectum or the urinary tract, and so forth. Many of the reports of such cases go back to old times and, no doubt, present "physiologic curiosities of considerable interest."

Although it must be admitted, Kisch ("The Sexual Life of Woman") says, that confusion has often occurred between vicarious menstruation and hemorrhages dependent on pre-existing genuine organic disease, such as hemoptysis due to pulmonary tuberculosis or hematemesis due to gastric ulcer, "still, the existence of a true vicarious menstruation must be regarded as fully established."

According to Crossen ("Diseases of Women"), vicarious menstruation is the discharge of blood from other parts of the body at the menstrual time; the vicarious flow is likely to be irregular, appearing only at some menstrual period. It is rare in any form and is found principally in nervous women in whom there is imperfect development of the uterus or imperfect performance of its functions.

DeLee ("Principles and Practice of Obstetrics") narrows down the question by demanding that, in typical cases of vicarious menstruation, three conditions must be present—the uterine flow must be absent, the periodicity absolute, and the organ from which the vicarious discharge comes normal. Such cases, DeLee adds, are rare, but authentic ones have been reported; for instance by Kisch (*loc. cit.*). DeLee points out that, "sometimes the organs from which the hemorrhage comes are diseased (as, ulcer of stomach, tuberculosis pulmonum, ulcer of the nasal septum, hemorrhoids, chronic otitis media), and in themselves would give rise to a bleeding surface; but, when the periodicity of the flow corresponds to that of the menses, the latter being absent, we still speak of vicarious menstruation. Occasionally, the usual flow is combined with a blood discharge from another organ. After castration, vicarious menstruation has been occasionally observed, and, during pregnancy and the amenorrhea of lactation, a vicarious flow may occur from another part of the body. The author had a case where, for nine months after delivery, the patient had a bloody discharge from the nipples lasting several days and recurring every twenty-eight days. The nipples were healthy and the patient amenorrheic. These hemorrhages are similar to the nosebleeds observed during pregnancy, the puerperium and the menopause."

Our interest in this problem was aroused by a talk given recently before the Chicago Academy of Medicine, by Dr. Emil Ries. Doctor Ries pointed out that, for menstruation to occur, two things are necessary, namely: ovarian substance and a uterus (both capable of functioning, be it added). The ovary does not need to be intact; in fact, in case the organ has been removed, it suffices for a portion of the organ to be inserted somewhere else for the uterine flow to occur. The tubes are not essential, nor is the cervix, but the uterine body is requisite.

That disposes at once of those instances of alleged vicarious menstruation that have been reported in small girls before puberty and in older women after the menopause. In these, as Ries asserts, there must have been some irregularity, some structural anomaly existing, the detection of which would have explained the occurrence of bleeding while its restoration would have caused it to cease. For instance, in CLINICAL MEDICINE for 1920 (Sept. issue, p. 625), a case of supposed vicarious menstruation in a little girl, eight years of age, is reported who had had nose bleed occurring every three months, ever since she was three years of age. It was pointed out editorially that precocious menstruation that was at the same time vicarious had never been reported and that it was very difficult to say whether this was an instance of vicarious

precocious menstruation. As a matter of fact, such a diagnosis would be rather improbable, because, at the age of three years, and even at eight years, neither ovaries nor uterus are able to function, at least in our latitudes.

In the same report, a case was related concerning a little girl who bled periodically from the nose until she was about seventeen years of age, when menstruation was established. From that day, she menstruated regularly with no more bleeding from the nose.

These and virtually all other cases of alleged vicarious menstruation do not comply with the conditions that would constitute them cases of menstruation and its vicarious nature. Doctor Ries showed, during his talk that, in all such instances he found definite local causes for the discharge of bloody fluid and that the phenomenon could always be explained and made to disappear.

It will be useful in this connection to inquire just what menstruation is. Opitz ("A Textbook of Physiology") says that the discharge of blood from the uterus constitutes only one part of the menstrual period which begins several days earlier, being ushered in by fatigue, pains in the back, headache, nervous irritability, and so forth. The second stage, that of flow, is followed by a third, a period of restitution, which occupies almost two weeks and is followed by a few days of rest. During the years of puberty, the life of woman, therefore, runs in cycles, comprising periods of premenstruation, menstruation, restitution and complete rest. The endometrium of the uterus presents a comparatively normal appearance only during the last stage of restitution, and the succeeding (comparatively brief) period of rest. During the premenstrual state, it shows evidences of proliferation, swelling and hypersecretion. The cells of the stroma lose their elongated shape and become more rounded. The capillaries are greatly distended with blood which in turn gives rise to a hyperplasia of the uterine glands. A few days later, blood begins to escape from the superficial vessels and forces its way into the lumen of the uterine canal and, through the constricted orifice of the cervix, into the vagina. But this hemorrhagic extravasation is not associated with any considerable destruction of tissue; in fact, the uterine lining remains rather intact, although it may be perforated here and there and even partially loosened from the underlying layers by spaces which are filled with blood. In most instances, this congestion also involves the tubes, ovaries and external genitals, but these organs do not contribute to the hemorrhagic discharge and, hence, menstruation is to be regarded essentially as a phenomenon of the uterus.

As to the relation between menstruation and ovulation, various hypotheses have been offered. The most recent one is that offered by Frænkel and based upon the hormone doctrine, namely, that menstruation is dependent upon the formation of an internal secretion by the corpus luteum which controls the blood supply of the ovary. It is quite evident that menstruation is dependent upon some activity of the ovaries, because the removal of these organs gives rise to an artificial menopause characterized by cessation of the menses and by atrophy of the uterus. This cessation of the menstrual flow does not result if the excised ovaries are transplanted into the uterus or elsewhere into the abdominal cavity. If menstruation has ceased, it can be made to recur by grafting a piece of ovary into the uterus or under the skin of the abdomen.

We have then quite manifestly in menstruation the result of interrelating function of ovarian substance and the uterus, and Doctor Ries was justified in demanding that both must be present for menstruation to occur. Bleeding in women, whose ovaries have been removed or are not yet or no longer functioning, because of immaturity or of atrophy, manifestly can not be called menstruating and, therefore, they certainly can not experience any vicarious menstruation.

If the term vicarious menstruation is to be retained at all, it would have to be used to designate a flow of blood that is vicarious inasmuch as it is not true menstruation. As already remarked, however, such a bleeding usually has no relation with menstruation, either direct or indirect. As Doctor Ries remarked in concluding his talk, "Vicarious menstruation is all right. But, it is neither vicarious nor menstruation."

The highest reward that God gives us for good work is the ability to do better work.—Elbert Hubbard.

CODDLING AND SKIN-BREATHING

In another department of this issue of CLINICAL MEDICINE (p. 515), Doctor Page breaks a lance in behalf of two of his favorite and pet ideas. He claims, justly, we believe, that we coddle ourselves too much, that we do not give our bodies a chance to eliminate all waste products of metabolism, and that we

deliberately foster in ourselves a vulnerability for "colds" in so doing. People who, like himself and many of his patients, wear the lightest and thinnest underwear, reserving heavier outer coverings exclusively for outdoors in inclement weather, become, by so doing, protected against "colds" and are, moreover, in far better health generally.

Another of Doctor Page's favorite teachings is that we should remember the essential unnaturalness of the upright posture, since this permits the abdominal organs to sag down and to suffer displacement. Doctor Page advocates, even in the case of adults, occasional creeping and crawling on all fours. He insists upon it that children, even tiny infants, should be placed upon their little tummies quite frequently and should be encouraged to crawl. On no account, he says, should they be urged to assume the upright position until they do so of their own accord.

Speaking of the matter of clothing, it seems to us that, in many respects, we *are* less subject to "colds" now than we were thirty years ago when woolen and flannel underwear was considered the proper thing, at least for winter, and when the same was *suffered* even in summer, although in lighter weights. If we compare those awful suits of underwear that we used to inflict upon ourselves with the pleasant, convenient and comfortable B. V. Ds. of today, we shudder in retrospect.

In this matter, as in so many other directions, women seem to have solved the problem by intuition (some may say, because of their inherent vanity; but—are not men every bit as vain as women?) rather than by reasoning. At any rate, they made a change largely because of greater comfort and, true, because of deference to style. Our mothers and grandmothers, those who were young women in the seventies and eighties, and even in the nineties of the last century, are horror-struck at the slimness of apparel declared to be absolutely sufficient by our young ladies from seventeen to seventy years of youth. And, yet, it seems to us that these latter are far more reasonable, because they are lightly clad indoors, where custom and preference demand high temperatures; and wear furs and other heavy coverings out of doors.

We men are not quite so well off in that respect, unless, indeed, we shed coats and vests as soon as we enter the house. That, though, is not always feasible and, very often, we are too warmly clad indoors and, by comparison, insufficiently so out of doors.

Experience has shown that there is much of merit in Doctor Page's contention that the skin of the whole body should be given an opportunity to function. We are informed by patients who are taking regular sun baths "in the altogether" that they feel invigorated and relieved, that they experience decided benefit from them. If we find the time to loiter after the morning's shower bath, and not have to rush into our clothing so as to make the next train, the physical well-being that is experienced is decidedly pleasant.

It seems to us to be quite true that we coddle ourselves too much and that a reasonable amount of "hardening" would soon take the reproach out of that term; since it would, indeed, result in a lessened susceptibility to changes in temperature, to drafts, to colder air.

As to Doctor Page's ideas regarding the upright posture, that, too, must be conceded a considerable degree of reasonableness. The benefits experienced under certain conditions from the periodical assuming of the knee-chest position, the relief from abdominal dragging and distress after lying for a while with hips raised or the body almost inverted, speak strongly in favor of the claims advanced. The advantages of letting infants crawl at an early age are too obvious to be in danger of contradiction. We ourselves have put babies as small as two weeks old on their faces and found them to develop far more vigorously and sturdily than did their contemporaries who were kept on their poor backs persistently or were at most permitted to lie on the side. Infants should be undressed several times daily and should be permitted to lie naked, kick and crawl, so as to exercise their limbs, and the muscles of their whole bodies, in fact. That will make for better development and improved health.

—

An interesting coincidence made it happen that, on the evening of the day when we dictated the preceding editorial, we came across a reference to an article by the late Dr. S. V. Clevenger,[1] which appeared in the *American Naturalist* for January, 1884, under the title: "Disadvantages of the Upright Position." A copious review of this interesting article is contained in Victor Robinson's clever biography of Clevenger, whom he designates as "The Don Quixote of Psychiatry." The book and particularly this portion (page 158) are recommended for study. We shall have more to say about the book itself which, so far, has not been reviewed by us through force of circumstances.

URINE AS A DIAGNOSTIC AND THERAPEUTIC AGENT

The article on the subject given in the title, which we publish in another department of this issue of CLINICAL MEDICINE (p. 525), was accepted not in order to announce or vaunt any remarkable or "new" method of treatment, nor for the purpose of ridiculing something with which we are not exactly in sympathy. Our idea was, to submit to our readers a method which is advocated in all sincerity by a practicing physician, which is based on ages-old principles and for which the most astoundingly favorable results are claimed.

The author asserts that, by employing urine specially prepared as a potent remedy (the urine always being secured from the patients to be treated) is tantamount to using "Nature's expression of pathological conditions" and that it is an isopathic procedure. The author refers to the opinion expressed by several physicians of note (beginning with Hippocrates) that a patient carries with him the remedy for the curing of his morbid state. While in many contingencies those general statements may be entirely correct, it would have to be proved that the excretion of the kidneys is the vehicle in which the remedy for the curing of the morbid state is contained.

We are not aware that anything but excretory, or waste material, has ever been discovered in the urine. The therapeutic idea in general (upon which the employment of the patient's own urine is based) results in what is *de facto* an autogenous vaccine, or bacterin or, at any rate, an autogenous bacterial preparation; it being customarily the pus or other wound secretions that are employed for the curative remedy. In these discharges, the bacteria responsible for the lesions are present in large numbers. What the patient actually gets is a suspension of these bacteria which, entering the circulation after absorption, stimulate actively the process of immunization which hitherto had been deficient.

In so far as the bacterial content of the urine (or of the feces, for that matter) is concerned, there can be no objection whatever to utilizing these excretions as sources of bacterial remedies. Indeed, the socalled entero-antigen of Danysz (*N. Y. Med. Jour.*, Jan. 4, 1922, and CLINICAL MEDICINE for April, p. 261) is based upon that very idea. A portion of fecal matter is cultured and all bacterial growth is utilized for the preparation of an autogenous vaccine. Similar bacterins have been prepared from the urine, after sedimentation and culturing.

That, however, is at considerable variance from the method advocated by Doctor Deachman. He employs the desiccated urine, the product of the desiccation having been triturated, presumably with sugar of milk, to the third or sixth Homeopathic potency. We are not going to cavil at the high potency and claim that, substantially, nothing of merit could be contained in it. We have become accustomed to exceedingly small doses of powerful medicaments and are always willing to be shown.

The utilization of excreta, to which, undoubtedly, the urine belongs, reminds us of the fact that this has been practiced for many centuries, although it was not always a question of opotherapy. To this day, there exists a popular belief that the power for good is inherent in these objectionable substances, and we remember repeated instances in our own practice when farmers or their wives informed us that their children had received doses of urine, either paternal or maternal in origin, for the treatment of convulsions; but, strangely enough, without success.

It is not so many hundred years ago that this form of therapy was practiced rather generally and, in 1696, Chr. F. Paullini devoted to the subject a monograph, entitled "HEILSAME DRECKAPOTHEKE."

Delving, as a matter of historical curiosity, into two volumes of Hovorka and Kronfeld, "Vergleichende Volksmedizin," we find that urine is employed popularly in various directions. It may be voided by a fever patient or by one with jaundice upon a bit of fresh meat which is given to a dog to eat. It is said that the patient will recover, while the dog becomes ill. The Korjaken, who live in the extreme north of Russia, and who are very fond of intoxicating drinks, utilize a fungus, *Agaricus Muscarius*, which is collected in the fall and dried and is eaten during the winter on special occasions. It produces a severe intoxication which is prolonged by the very simple practice of making the "patient" drink his own urine which is highly charged with the excreted toxins. The intoxication can, in this manner, be prolonged almost indefinitely.

Among other unappetizing remedies employed for gargling, urine and infusion of horse droppings are in good repute in some portions of Germany and Austria. In croup, urine, cow droppings and other things are used for external applications. A certain

author of the last century recommends, for goiter, adding urine voided at three different times to a sponge and the head of a pike. The three articles are placed in an earthenware pan and covered securely. It is then exposed to fire until everything has been incinerated completely. The powder is placed in a flask, good white wine is added to it (shaking well), and, on the day following full moon until the day of new moon, one glass is to be taken in the morning fasting.

For consumption, a fresh egg is placed in a saucepan and the urine of the patient is poured over it so that it stands one-quarter inch higher than the egg. The saucepan is placed on the fire. When the egg is hard-boiled, the shell is taken off and, with a bit of wood, holes are punched into the white down to the yolk. It is then returned into the urine, cooking once more until the latter is evaporated. After this, the egg, together with the shell, is buried in a red-ant hill, while the saucepan is thrown into running water, down stream, by no means up stream. As soon as the ants have eaten the egg, the patient will gain in strength.

Dropsy, or various swellings of the body, are treated, among other things, by making the patient drink his own urine in the morning fasting, or he may hang a hog's bladder filled with his urine into the chimney. Italian physicians employed heterogenous urine (that is, urine of animals), against dropsy, believing that the urinary secretion is stimulated in that manner. Even Morgagni reports of one of his patients that he drank daily from seven to thirteen ounces of cow's urine.

Many savages are said to devour their own excreta and to offer ritual or religious reasons, mainly claiming that urine and feces are the seat of the soul, and that they obey a sacred custom.

Urine is also recommended against gastralgia, for which it may be hung up in the chimney in a hog's bladder.

Against rheumatic pains and inflammatory rheumatism, the Magyars wash the painful places with urine or they make compresses with the same substances.

Urine is considered also as a useful cosmetic.

It is employed against itch (either autogenous or heterogenous) against freckles and even against birth marks. Clinical observation does not seem to have shown that bedsores may be due to emaceration of the skin by urine, and it is recommended to wash the back with freshly-voided urine, with vinegar or with good brandy, in order to prevent bedsores. Conjunctivitis is said to yield to all sorts of eye washes, such as lemon juice, saffron, milk (especially human), spirits of camphor, urine, saliva and other attractive things.

Enough has been said to show that the faith in the impossible, the *outré*, is strongly inherent in human nature, especially in those whose thinking has not been influenced by sound and logical ideas. The therapeutics of the human excretions and of those of animal origin is neither new nor isolated. It is found almost everywhere and always is inspired by the thought of some superior natural agency being involved. While all these things are different from Doctor Deachman's arguments, we can not help being reminded of them, especially since he places such stress on the remarkable curative powers of the secretion of the kidneys.

We cannot deny that the urine often may contain bacteria or bacterial toxins that are eliminated through the kidneys. In that event, the therapeutic administration of urine would amount to the use of bacterin or toxin preparations and good results must be ascribed to that fact.

Men do not lack strength; they lack the will to concentrate and act.—Elbert Hubbard.

"VACCINES FOR BROKEN LEGS"

In all probability, the author of that remarkable production, bearing the title given in the caption of this editorial and which was published in *Hearst's International*, a few months ago, thought himself a wonderfully clever chap. With equal probability, some of his admirers and many foes of the medical profession chuckled at the successful(?) "exposure" to which he believed to have subjected physicians employing bacterial vaccines other than those authorized by laboratory men and only in conditions clearly due to the pathogenic action of single bacteria.

Parenthetically, it may be remarked that such single infections hardly ever occur, and that monovalent bacterial vaccines have but a very limited sphere of action, while polyvalent preparations are constantly proving themselves as eminently effective in numerous pathologic conditions.

We had something to say about this particular criticaster of physicians, in CLINICAL MEDICINE for January (page 55) and for February (page 87). Today, we are very anxious

[*Concluded on page 529.*]

Leading Artieles

The Therapeutics of Radiant Light and Heat

By WILLIAM BENHAM SNOW, M. D., New York, N. Y.

THE consideration of radiant energy from luminous sources, natural and artificial, as applied to therapeutics, dates in the more recent times from the introduction, by Niels Finsen[1] (1860-1904), of the use of the higher frequencies but with particular reference to the ultraviolet rays from the sun's rays and the electric arc in the treatment of the two forms of lupus.

Later, in 1898, Dr. Margaret A. Cleaves published a paper on the use of the electric-arc-light bath in the treatment of pulmonary tuberculosis[2] and, in a work by the same writer on Light Energy,[3] published by Rebman and Company, she gave an elaborate consideration of the different form of radiant light and heat.

The writer of this present contribution published a work, in 1908 and 1909,[4] which was printed in a series of paper and issued in book form in 1909. In this work, were considered the then to date methods of using the incandescent and arc lamps and an introduction of the first published consideration of *convective heat*[5] in contradistinction to conversive heat, or heat produced in the tissues by the penetrating radiations and high-frequency diathermy.

The later published discoveries by Rollier, of Switzerland, on the use of the sun light in the Swiss alps, in the treatment of tuberculous joint affections and, later, the introduction of the mercury vapor lamps, by Peter Cooper Hewitt, and their employment in quartz tubes by Kromayer, and the later development of their therapeutic indications, by numerous writers, have marked the gradual development of the scientific therapeutics of radiant energy which has placed it in a position second only to electrotherapeutics in the role of valuable therapeutic measures.

—

Radiant energy from luminous sources, as first considered by Sir Isaac Newton, was thought by him to consist of small particles of matter, or corpuscles, that were energetically projected through the ether from the sun, producing physical and physiological effects as they come in contact with solid bodies, and light as experienced by the eye with sight. This theory of Newton's was superseded by the later theory of Huygens which introduced the wave theory of light, the theory that seems demonstrable and rational and is at the present time accepted and includes in its observations the x-ray and other radiations and emanations.

The luminous radiations include the wave lengths of the solar spectrum with the higher frequencies of the invisible ultraviolet (extending beyond the violet). These varying frequencies are measured in terms of Angstrom units. The measures of the wave length of light, as numbered in metric units, are as follows:[6]

"As measures of the wave length of light, a number of metric units have survived and are liable to lead to confusion:

"The micron, denoted by m (Greek), is equal to a one-thousandth of a millimeter.

"The mm (Greek) is equal to a one-millionth of a millimeter.

"The Angstrom unit equals one ten-millionth of a millimeter.

"As seen, the basis of these units is the millimeter, which was temporarily used as a standard unit of length before the establishment of the present system of units, which is based on centimeter length, Gram mass, and second-time measure.

"A radiation of the wave length of 60 micro-

[1]Finsen first published his observations on the stimulating action of light in 1895. At the same time, he pointed out that the chemical rays might be useful in the treatment of disease. "Light Energy" (ref. No. 3, page 333).

[2]Transactions of the American Electrotherapeutic Association, 1898. *New York Med. Journal*, Jan. 28 and Feb. 4, 1899: The Electric Arc Bath, by Margaret A. Cleaves, M. D.

[3]Margaret A. Cleaves, "Light Energy," New York, Rebman and Company, 1904.

[4]"Radiant Light and Heat and Convective Heat," by William Benham Snow.

[5]"William Benham Snow, *loc. cit.* Contrasting Conduction and Convection, page 93.

[6]Steinmetz, Radiation Light and Illumination, page 7.

centimeters thus can be expressed also as: 6000 Angstrom units, or 0.6 m (Greek), or 600 mm (Greek)."

"Extending down from the violet, indigo, blue, yellow, green, orange and red are the colors of the prismatic rays properly known as light-rays.[1] The visibility of radiation is greatest between the wave lengths $50x10^{-6}$ to $60x10^{-6}$ and good between the wave lengths $41x10^{-6}$ to $76x10^{-6}$, but extends more or less indistinctly over the range of wave lengths from $33x10^{-6}$ to $77x10^{-6}$ and faintly even as far as $30x10^{-6}$ to $100x10^{-6}$."

The invisible spectrum of the ultraviolet rays and the infrared (below the red), cannot be properly considered as light; for they are not visible. Only the visible rays should be termed as light, but they often are incorrectly called light, as have x-rays also been so termed. We therefore express the ultraviolet and infrared in terms of *rays* instead of *light*.

The range of infrared rays, as demonstrated by the thermopile, measured in terms of heat, is nearly as wide as the visible solar spectrum, indicating a range of frequencies of increasing wave length which have been properly designated as *heat rays*. These, however, are not alone the heat-producing rays, for the luminous rays all produce heat, diminishing in degree from the red to the violet. Practically no heat is produced by the emanations or radiations, of the higher frequencies. Heat is not produced by radiant energy until it comes in contact with resisting bodies when they are converted into heat by transformation of energy. Heat so produced is designated as *conversive heat*, and is transferred by *convection* throughout animal organisms by the blood stream, or by *conduction* in inert solid bodies. Radiant energy from luminous sources produces heat in the tissues to depths penetrated, accumulating heat in the fixed cells, with constant dissipation by the circulating blood stream.

Neither the ultraviolet rays nor the lower frequencies of greater wave lengths of the infrared rays penetrate glass. As shown in the case of the former, tanning and blistering does not occur and the glass bulbs become very much more heated by the radiations in carbon-filament light bulbs than with the fluorescent tungsten bulbs. When a natural blue-glass bulb is illuminated, so much heat is imprisoned by the resistance offered by the colored glass, that the latter becomes intensely heated by absorption of the luminous rays, demonstrating that the rays of the visible spectrum also produce heat.

The properties of light: (1) Radiations through space and nonresisting substances emit no heat. (2) Radiations are reflected from certain surfaces, as mirrors, water and other smooth, white or polished surfaces, when the angle of incidence equals the angle of reflection. (3) They are refracted towards a perpendicular when passing from a rarer medium to a denser medium, as from air to water, from air to glass; and from the perpendicular when passing from a denser to a rarer medium. (4) They are polarized when passing through certain substances, as feldspar. (5) They produce heat by convection, or absorption, when the radiations come in contact with resistant substances: or by conversion when radiant energy is converted into heat units. (6) When it passes into translucent substances, as human tissues, heat is produced as far as the radiations penetrate.

In accord with the physical properties the action of radiant-light heat production is considered here with observations on its effects upon the forms of life including the *antiseptic* effects and *reflex* effects from action upon the end nerves as influencing the deep spinal centers, the effects on *metabolism*, and the *chemical* effects from action upon the blood stream and as influencing the chlorophyl body in plant life. The higher frequencies have been considered as the chemical rays, though all rays (as Sir Oliver Lodge has said), undoubtedly "produce some chemical effects."

The Apparatus Employed

The apparatus employed in therapeutics may be divided into different forms and arrangements of the arc, incandescent and mercury vapor lamps.

The large incandescent light apparatus was first introduced as the high-candle-power lamp, or the socalled "leucodescent lamp," the advertising propaganda of which gave wide publicity to the subject of incandescent light therapy, in 1907-8; and then this form of therapeutics was extensively exploited with the profession. There followed the introduction of the established methods of using light from various types of applicators.

The smaller therapeutic lamps were first manufactured in such a way as to project a focus a short distance from the reflector. By the writer's insistence, the small reflecting lamps were finally properly made to reflect slightly divergent or parallel rays, in accord with the law of reflection which depends upon the distance at which the light is produced from the reflecting parabola.

[1] Steinmetz, *loc. cit.*, page 9.

The introduction of light-baths (arc and incandescent), as advised by Cleaves, Kellogg and others, came soon after the first use of artificial light in therapeutics.

The smaller multiple incandescent-light apparatus was introduced in the Woman's Hospital in New York City by Dr. Herman Grad and was later improved and made adjustable through the influence of the writer. These were perfected by the manufacturers in accordance with the expressed wish of the author for use during the late war, and were employed in all Government Hospitals throughout the country. Their introduction did much to bring the value of radiant light and heat to the attention of many members of the medical profession, who would not otherwise have learned of its possibilities.

It was in the army hospitals that the inappropriate term "baking" was introduced, and it is still unscientifically employed.

The mercury vapor lamp, invented by Peter Cooper Hewitt, and the principles employed with the quartz tubes, manufactured by the Germans and introduced by Professor Kromayer, established a more practical use of the ultraviolet rays with apparatus that is now produced by different manufacturers in this country in the form of both air-cooled and water-cooled lamps. These are now receiving general recognition by the profession as producing most satisfactory results in certain conditions, particularly as concerns effects on bacteria and fungi and as influencing metabolism.

Physiological Effects of Radiant Energy

The physiological effects of the forms of radiant energy, as suggested by the physical effects, may be divided into the action of heat as it affects the skin and underlying translucent tissues. The penetration of radiant energy into the tissues is proportional to the wave length; inversely, as the frequency, (except, as to the higher frequencies, as of the x-ray), they, in the words of Sir Oliver Lodge, "go straight on." The ultraviolet rays are very superficial in their effects, and very irritating to the surfaces to which they are applied, until the skin becomes tolerant with tanning, as is evidenced by the sunburns and blisters produced. The lower frequencies and greater wave lengths of the infrared do not pass through glass but do penetrate more deeply into the tissues than the higher frequencies of the infrared radiations. At the present time, it has not been determined at what wave lengths this characteristic limit of the degree of penetration through glass takes place, but the heating which occurs confirms the fact that some are absorbed. It is well demonstrated that the heating, or thermic, effects are manifested to considerable depth beyond the penetration of the rays of the visible spectrum.

1.—The effects produced are due to the physiological action of heat as indicated by the intense hyperemia produced at the surface and in the underlying tissues with diminishing intensity, as the energy of the rays is expended upon the resistant tissues, but extending to a demonstrable depth of at least four inches into the tissues. The degree of hyperemia varies as the heat impinging upon the surface penetrates the deeper tissues of the body. An intense reflex effect from the heat applied at the surface is induced in the deep spinal centers with marked responses of vital functions, indicated by an increased strength and volume of the pulse.

This effect is noted, particularly in pneumonia and shock, by an increased pulse volume, regulation and lowered frequency, and by an increased depth of respiratory excursions.

2.—*The antiseptic effects* of incandescent radiation affect some forms of germ life susceptible to heat and light, as are the gonococci and pyogenic bacteria; and by the *hyperemia* induced. The increase of phagocytic activity within the tissues which is present, with the increased flux of blood through the tissues and the effects of light and heat, constitute a combination of effects destructive of germ life which are derived from the visible and infrared incandescent radiations. These radiations, as derived from luminous sources, meet a larger scope of indications and are undoubtedly of greater therapeutic value than are the higher frequencies of the ultraviolet.

3.—*The antiseptic effect of the ultraviolet sun's rays* are remarkable, however, as influencing the natural conditions of environment by the purification of the atmosphere and the destruction of germs in water on the earth's surface. Those rays maintain the purity of the air and water for the safety of the animal species. When animal life is subjected to too-long and too-generous exposures to the ultraviolet rays, they may perish if unprotected by hair or clothing. They cannot, until gradually rendered immune, withstand the irritating chemical effects of these radiations. The green leaf protects the small animalculæ seeking the shade at the time when the sun's rays are vertical. The germs or fungi on the surface tissues, that are reached, are invariably destroyed by these radiations. If the radia-

tions were as penetrating as the spectral and x-rays, the problem of treatment of infection would be universally solved.

4.—*Chemical effects* are characteristic of all of the frequencies as affecting plant growth and development, and the effect upon the blood, as influenced by the increase of hemoglobin, and also as destroying germ life in the outer layers of the skin. The studies of Hess and others, as to the influence of the ultraviolet rays on rickets, establish a notable constitutional effect, but do not take note of the associated influence of the heat-producing rays which play a joint chemical action upon metabolism, with the higher frequencies. Those rays undoubtedly also add an important role in changing the condition of the blood subjected to the collective radiations of the sun and the radiations from artificial sources.

It will be seen by the foregoing, that the therapeutic indications for the employment of radiant energy cover a very extensive field.

Method of Radiation Treatment

Method: The employment of reflected incandescent light as a therapeutic measure requires certain definite methods of application, as to *time* and *intensity*, which should be followed in all cases in order to so affect the local processes that the administrations will be effective. The uniform rule as to time is, that exposures should be continued at each sitting for *at least one hour* in the severe acute cases (as of erysipelas), when the treatment should be repeated alternately with one hour's rest until the acute symptoms subside, and then less frequently until recovery is complete.

The intensity of treatment is dependent upon the skin toleration to the heat produced. By this should be understood, not the greatest degree of toleration of the heat, but at a temperature of a little more than comfortable heat. The degree of temperature is to be regulated by the distance at which the light is suspended from the surface.

That there is any such effect as "deep therapy", can be explained only by the fact that the number of infrared radiations are of greater volume, as from a carbon filament lamp or from applications projecting only red or infrared rays in greater volume. It must be understood that the skin toleration is governed by the intensity of the application.

As for the penetration of light; the light from a single candle will penetrate as far as similar radiations of high candle power, but the effect will be relative to the volume of radiations, so that high-candle-power lamps are only applicable to large areas, and in like manner a small lamp will be adequate for the treatment of smal areas, the skin toleration, as previously stated, determining tne effect.

These general rules of the principles of application will govern the use of the rays, so far as it concerns the therapeutic employment of incandescent rays.

With the administration of the ultraviolet rays different rules apply; for the skin toleration of different patients to the irritating action of the ultraviolet rays, as to tanning and blistering, is variable, owing to differing idiosyncrasies, as is well known from the effects of the sunlight upon different individuals.

When giving extensive applications of ultraviolet radiations for the general therapeutic effect, it is customary to make the first exposures for one minute with the air-cooled mercury vapor lamps suspended at a distance of from 18 to 20 inches from the surface; the dose to be doubled on alternate days. In the treatment of some skin affections, however, it is customary to make the application for three or four minutes on the first day, in order to produce a blister, following it with heavy doses on alternate days. This method is successful in psoriasis and eczema. To produce a constitutional effect by action upon the blood content, it is customary to precede the non-blistering application of the ultraviolet by sufficient administrations of incandescent radiations to produce an active hyperemia of the skin, and so affect the circulating blood stream.

For the treatment of local infection, the exposures to the ultraviolet rays are usually made through a quartz applicator exerting pressure to render the tissues anemic, employing either the air-cooled or, preferably, the water-cooled mercury vapor lamp. It has been demonstrated, for applications to the mucous surfaces of the nares and other mucous cavities, that it is possible with the quartz applicator to convey the administration from the end of the applicator, as the ultraviolet rays will follow a curved course to be discharged from the end of the applicator without losing their energy from the sides in passage. With sufficient degrees of pressure exerted over a surface, the tissues are rendered anemic, and, as first demonstrated by Niels Finsen, will then permit the rays to penetrate more than twice the distance from the surface.

—

Infection treated by incandescent light radiations: In the writer's previous reports it has been shown that types of infection not resistant to heat are readily destroyed by reflected

incandescent radiations; notably in erysipelas and in gonorrheal *ophthalmia.*

Erysipelas was first treated by the writer by reflected incandescent radiations in 1910[8] and the results have been verified by numerous other observers since.[9]

Gonorrheal ophthalmia: Probably no greater misfortune has been visited on the infants and sometimes on adults, than pannus with blindness, caused by gonorrheal infection of the conjunctiva, which has proved so intractable to usual methods. So common has been the affliction, that it has become an established routine practice for the accoucheur to administer, or order as a prophylactic, drops of a solution of silver nitrate applied to the eyes of the newborn child.

In the winter of 1919, the writer advised the use of reflected incandescent radiations for a physician who had become infected at the Port of Embarkation where the men were returning from the war. The result was phenomenal. The intense pain in the closed and swollen eye was relieved of the pain within thirty minutes; and, by recurrent, one-hour administrations, the condition had cleared up, leaving the eye normal within one week. Other cases have since been reported[10 11 12] and published which have verified the discovery. It was what would have been expected from the fact that the gonococci are susceptible to light and to heat at relatively low temperatures.

Purulent ophthalmia yields to the same procedure with prompt relief of pain soon after the institution of treatment. With the ultraviolet rays filtered out by the glass bulb, there is no element of danger from reflected incandescent radiations even when exposed with the lids opened, though the effects of heat on bacteria do not require that the bared conjunctiva be exposed.

Eye injuries: In this connection, the treatment of traumatic injuries of the eye by reflected incandescent radiations offers one of the most practical methods of relieving local inflammation; the relief afforded following half an hour's exposure to reffected light over the closed lids, after removal of a foreign body, gives ample assurance of its value in conditions of irritation or inflammation.

Colds, as coryza, are promptly relieved by a few one-hour exposures to reflected incandescent radiations.

Superficial infections, before pus is present, may as a rule be aborted by prolonged applications of these reflected radiations.

Postoperative employment of the same, following operations for evacuation of pus or after all surgical procedures, is a prophylactic against infection, hastens healing and lessens or prevents induration and scarring of the skin.

Increase of local phagocytosis is induced by the hyperemia effected in the treatment of deeper-seated infections, such as otitis media, acute or chronic, cholecystitis and inflamed appendices, which will often be aborted in the acute stage, and experience great relief in all cases. In these cases, the effect undoubtedly depends very largely upon the hyperemia induced through the heat effect and also hastens the recovery of the condition after operation.

Cholecystitis: The relief obtained by diathermy renders this the choice of methods in internal affections, but it is not at hand at the home or in the physician's office in rural districts. However, the electric light will now often be found in the homes in many country towns and can be used to great advantage in these cases.

Treatment of otitis media by incandescent light constitutes one of the most important advances in light-therapy and was reported and published first by Dr. Herbert F. Pitcher; it has been repeatedly referred to by writers on the use of light-therapy.

This is a method, however, that the otologists, as a rule, have entirely ignored. There is probably no greater boon to the sufferers from otitis media than this method, which is of great value as compared with other methods which very often permit the trouble to progress on to mastoiditis. Very few cases, if any, of chronic *purulent otitis media,* properly treated by reflected incandescent radiations, would be followed by mastoiditis if the radiant light and heat were applied over the side of the face, with the ear as a center, over a diameter of four inches; suspending the small lamp in position for one hour, for two or three daily applications, until the discharge ceases, which it will, as a rule, do within three weeks. This will cause the pus formation to cease unless there is a necrotic condition which will, however, also be rendered innocuous.

[8]William Benham Snow, The Treatment of Local Infection by Physical Measures *Medical Record,* March 21, 1923.

[9]James R. Bingham, A Case of Erysipelas Treated by Reflected Radiant Light. *American Journal of Electrotherapeutics and Radiology,* Dec., 1918, p. 320.

[10]M. M. Thompson. A Case of Ophthalmia Neonatorum Cured by Radiant Light, *Ibid,* July, 1919, p. 209.

[11]Louis L. Gannett. A Case of Ophthalmia Neonatorum, *Ibid,* May, 1922.

[12]F. S. Holliday. Gonorrheal Ophthalmia in an Adult, *Ibid,* April 1921, p. 159.

Pneumonia: Dr. Williams, of Toronto, and Dr. Torbett, of Marlin, Texas, have both reported cases relieved by this measure, showing that, when the incandescent light was used over the chest from the beginning of infection, the fatality of the condition could, as a rule, be lessened.

For the relief of painful conditions, as of commencing neuritis, of herpes, and following traumatic injuries, and in acute and subacute mastitis and painful conditions over the abdomen or chest, radiant light and heat gives results that are far more efficacious than poultices or hot water bags, because of its lasting effects, which are operative more deeply in tissues than the local applications, the effects of which are rapidly carried away by convection when applied to the skin.

The treatment of x-ray dermatitis with reflected incandescent rays has been long recognized by those who are familiar with the counter effects of reflected radiant light and heat as arresting early and advanced degrees of x-ray dermatitis. There has not been an uncontrolled serious case or early case of x-ray dermatitis, in the writer's experience of more than twenty years, with the x-ray, owing to the fact that we discovered, more than fifteen years since, that these cases could be easily counteracted by the use of radiant light after the appearance of dermatitis, but not as a prophylactic, lest it interfere with the desired effect of the x-rays. It was in an effort to prevent x-ray dermatitis that the writer discovered that it prevented the x-ray effects. Thus he established its value for the treatment of the condition when it occurred.

The later discovery, that the ultraviolet rays also have a marked effect in relieving the serious conditions that occur on the hands of physicians who have been exposed for years to the x-ray, was highly important as affording a relief to these unfortunates. Both types of radiation are employed in these cases as they are used in the others.

The therapeutics of the uttraviolet rays is a subject too large to consider more fully in the limited scope of this paper. It will be observed that the field of usefulness of these measures, as concerns both, the incandescent and ultraviolet rays, is a very important one —one that can be readily employed by all members of the medical profession. As soon as the teaching body of the profession is brought to fully realize the importance of these valuable measures, they will be adopted for the relief of many conditions that can not be so well controlled by other methods.

Radiant Light and Heat in Orthopedic Conditions

By HENRY W. FRAUENTHAL, New York City
Physicain and Surgeon-in-Chief, Hospital for Joint Diseases, New York

THE use of sunlight as a remedial agent dates back to the earliest times. The ancients had types of solariums upon the roofs where they exposed their nude bodies, ascribing great healing powers to these sun baths. Hippocrates, Celsus, Rhazes, among the ancients, speak highly of the value of sunlight in the treatment of disease.

Modern discoveries in lamps and lights have been devised to furnish in various degrees special portions of the solar spectrum in the treatment of disease. I wish to concern myself merely with the various types of orthopedic conditions and the benefits derived from such physical measures.

We must bear in mind such facts as have been determined by scientific investigation, before entering into their practical application in the treatment of disease.

Our source of light may be the sun's rays, the electrical arc lamp, the incandescent light or the mercury vapor lamp.

Effects of Light

The action of the light is manifold, one being local, chemical, nutritional and upon the nervous mechanism; the other is extended to a general constitutional effect.

We have a local stimulation with dilation of the sweat glands and the creation of an active elimination; when sufficient heat is produced, a general constitutional effect follows.

The local hyperemia increases the number and activity of the leucocytes and in this way destroys bacteria and promotes the elimination of toxins.

When we are called upon to heal acutely inflamed joints, one of our most efficient remedies is the local application of light plus heat by continued exposure of the affected joint for from 15 to 20 minutes or longer, followed by passive motion; the greatest value in hastening repair follows such exposure of joint to light and heat. The pores are open to a much greater extent making the application of

ointment or liniment more useful. Those efficacious in a particular case, should be used, as blue ointment, in lues.

In the past year, I have observed large numbers of infections of the feet, knees and other joints of the body, being results from infection of "Flu" bacteria or their toxin, and I am of the opinion that, while the heat has increased the blood supply to the affected part, the penetration of the light has had a decided bactericidal effect and has aided in eliminating the infection.

Rickets Due to Light-Deficiency

In a recent article by A. F. Hess and Lester Unger, the value of direct sunlight in the cure of rickets was demonstrated. First, the mercury vapor lamp was used and exposures of the entire body were made every few days, for from three to twenty minutes, at a distance of 120 to 75 cms. The effect, in all cases, was curative, as demonstrated by clinical examination and by the appearance of calcification at the ends of the bones.

Following this success with artificial rays, the effect of sunlight on infantile rickets was investigated. To this end, infants were exposed, under careful supervision, to the sun's rays in increasing degree. After a period of three to four weeks, a similar calcification of the epiphyses was noted, as well as general improvement. This beneficial effect of the sun's rays as well as of the artificial rays was achieved although the diet was in no way altered: some of the babies were receiving dry milk of the same lot, both preceding and during the treatment.

The result leads to the conclusion that the remarkable seasonal incidence of rickets is due to the seasonal variation of sunlight: that many cases of rickets are due to defective hygiene rather than to dietary errors (although diet is also an etiologic fact in this disorder); that sunlight should be used to prevent and to cure infantile rickets; and that, in metabolism studies, both on animals and on man, the influence of sunlight must be noted and taken into account.

Actinic Rays in Tuberculosis

The value of the actinic rays of the sun in tuberculosis was just called to the attention of the profession by Dr. Trudeau, at Saranac. Its use in bone and joint lesions has been demonstrated by Dr. H. Rollier, at Leysin, Switzerland, whose work has shown that, by exposing the body nude to the direct rays of the sun, daily, beginning with short exposures, for which the time is daily increased, the pain is rapidly decreased in the knee, hip and other joints, that repair at the foci of disease is produced and a more rapid cure established and that discharging sinuses are closed up. I have followed this method at the Hospital for Joint Diseases, exposing the patient on the balcony to the direct rays of the sun. In the new hospital, now in course of construction, we shall be able to place every patient on the balcony for direct-light treatment.

Obliterating Endarteritis

The strongest incentive for presenting this paper was in relation to the use of light (sun light or some electric-light substitute) in the treatment of the disease known as Obliterating Endarteritis, or Thrombo-angitis Obliterans. I presented a paper on this subect at the XVI International Medical Congress, held at Budapest, in September, 1909.

This disease, which is confined to Hebrews born in Galicia or the adjacent countries bordering on that country, while isolated cases are found in others, seems to be on the increase. In this country, cases are found different from syphilitic and diabetic gangrene.

The patient complains of pain in the toes, which extends up into the calf muscles. Spasm in the calf muscles and in the quadriceps (intermittent claudication) causes the patient to stop and wait until the spasm passes over.

These pains are increased at night when the patient is in the recumbent position, due to the slowing down of the heart's action and of the circulation.

In the advanced state, the patient only sleeps for short intervals and is compelled to get up and walk in order to stimulate the circulation in his legs.

The patient's gait is such as often to lead the physician to treat him for flat feet.

The feet appear blue, congested and cyanotic, but the pressure of the hand and the manipulation of the feet elicit little pain.

The sensation to heat and cold is diminished.

The feet have a cold perspiration and this clammy, cold feeling gives one the impression of touching a cadaver.

The pulsation of the arteria digitalis dorsalis and plantaris is either decidedly enfeebled or unrecognized.

The patient suffers less in summer than in winter.

These symptoms extend over months and sometimes years.

As the cases progress, unfavorably, there is an atrophy of the toes, a darkening of the skin, and a dry gangrene appears in which the progress of the destruction differs materially in its rate of progress to that found in other

types of gangrene, extending over months. As most anodynes slow down the circulation, they increase rather than relieve the pain.

This disease is never found in the female!

A great deal of scientific investigation has yielded no information: Smoking, ergot in rye bread, increased sugar content in the blood have been accused as causes; but, were this the case, the disease would occur in other nations and be much more common. I have treated many cases in men who have not used tobacco in any form. The only other nation that has the disease are the Japanese.

At the Hospital for Joint Diseases, we have a record of over 1,100 cases:—only 4% show a Wassermann-positive, which is much below the Wassermann-positives found in the other cases treated.

Although heat in various forms has been used for years, and all types of medication as well as glandular extracts, no benefit could be ascribed to them.

Success of Light-Treatment

November, 1907, I treated my first case with the light from an incandescent lamp. (The patients can expose their feet to the direct rays of the sun).

Samuel R., age 39, Russian. Cutter by occupation. No history of syphilis or tuberculosis. Uses alcohol and tobacco moderately. Patient had one brother who was similarly affected and who, at the age of 19 years, had the right leg amputated below the knee; two years later, his left leg was amputated above the knee. Since that time, the brother has remained in good health with no extension of the process.

Patient consulted me at the Hospital, in November, 1907, for a pain in left foot, which extended up the posterior part of the leg to the knee, which had begun two years before. He had not been able to work for six months, nor had he worn a tight shoe on the left foot for six months. For five months, he had not slept in a bed but in a chair and only for a short period at a time.

When he was compelled to walk about to relieve the pain, his foot gave him constant distress which was accompanied by lightning-like radiating pains, from time to time, being more frequent at night.

The foot was cold, blue, and showed a beginning gangrene of the little toe; the arteries could scarcely be felt. He had already been given local heat to the feet by means of hot sand, salt and water, also with various local application of salves and ointments, together with internal medication; but without permanent benefit or the arrest of symptoms. I determined to try the effect of the heat and light as obtained from a 500-candle-power incandescent light. The heat was interrupted every few seconds, but only when he could no longer tolerate it. This was kept up for a period of five minutes on his first visit.

On his return, the next day, he declared that he had slept during the night for a longer time than in months, and without pain. I thought that this was merely mental suggestion. I repeated the treatment daily for five days regularly, after which patient again wore shoes, and he continues to do so.

His pain gradually disappeared, his gangrene in the little toe resolved and a new nail appeared. He has been well and without symptoms for the past six months.

I saw him after a lapse of four weeks, on June 25, 1909, when I called him to my office on the eve of my departure. He declined further treatment as he regarded it a waste of time, since the temperature of his left foot was the same as the right and no pain had been experienced for 8 months.

The patient has received no treatment since 1910 and has had no return of symptoms. He has been shown (with other cases) over a period of 12 years at various medical societies.

Based on the good results in this case, treatment with light has been extended to over a 1,000 cases. We have in many cases given what is termed intensive treatment; that is, exposing the foot and lower leg to a light-bath with almost no heat, for from 12 to 24 hours. In a few days, the pain disappears and, after six or nine months, there occurs a return of pulsation in the artery. How this is accomplished, it is difficult to understand. The fact remains that the pulsation returns.

It would please me to give the history of many of these cases, but space will not permit. By this light-treatment, I have saved more than 65% of my patients from amputation and urge my readers most strongly to try it, should they be consulted in such cases.

In diabetic gangrene, there is great danger of burning the patient, if he is not on the alert. Diabetic patients have no sensation, and are often burnt and blistered on that account.

160 West 59th Street.

Treatment of Urate Calculi By Therapeutic Immunization*

By W. M. CROFTON, University College, Dublin, Ireland.

THE idea suggested by the title of this paper, namely, that it is possible to treat a case of uric-acid calculi by means of therapeutic immunization, must seem at first sight a very far-fetched one, but I hope to show, by the actual success of a case and by theoretical considerations, that such success not only did occur but that it was theoretically probable that it would. It was not only serviceable from the point of view of relieving an almost intolerable condition, but it was also satisfactory from the point of view of confirming my previous statements as to the successful treatment of gout and its allied conditions—conditions in which the formation and the excretion of urates are very much increased. Such conditions were briefly discussed (both, the microbial etiology and the pathological chemistry) before the Medical Section of this Academy, in January, 1917.

A man aged 43, was sent to me by Dr. Cooke. He gave the following history. Eight years before, a rough uric-acid calculus came away and, since then, he had been continuously passing small calculi and had to be constantly treated with scopolamine and morphine to relieve the renal colic. All the symptoms pointed to his right kidney. His teeth had been gradually getting loose for 20 years and all had been removed three years before. Ten years before, his appendix had been removed. He now suffered from symptoms of intestinal indigestion, i. e., he had an abnormal amount of wind in his bowel. He had typical dry, gouty eczema on his head. He gave a history of bilharzia disease in his youth.

He presented, therefore, a typical history—the typical history almost invariably associated with rheumatism including gout, while the bilharzia disease suggested that some lesion had persisted in the right kidney in which the urates were deposited. Cultures from the urine were sterile. Staphylococcus Albus was isolated from a blister made on the dry eczema of his head and B. Coli from his feces in pure culture.

I told him that, since there was no culture from his urine, it was improbable that he had a lesion produced by microbes in his kidney and the only thing possible for me to do in the way of treatment was, to clear up his chronic intestinal infection and his eczema, and that, by this process, I knew from experience, I could get rid of the abnormal amount of urates that he was producing in his body and excreting, and so get rid of the material from which his calculi were made. I hoped that, when he had passed all the calculi which had formed and were then forming, he would be free from any further trouble.

This turned out to be the case. The first dose was 100 million Staphylococcus and 2½ million B. Coli antigen; the doses were steadily increased until he had had 5,000 million Staphylococcus and 500 million B. Coli antigen. Just as he arrived back at the Cape, the patient passed a fairly large fusiform calculus which had been giving him trouble for many months, it having been stuck just about the entrance of the ureter into the bladder; during the next few days, he passed some small pieces of grit.

This was in June, 1920. He has had no further trouble since, no calculi and no trace of pain. His urine which, at the beginning, had been loaded with urates, was now quite normal in appearance and had no lateritious (brick dust) deposit.

Chemistry of Metabolism

It may be interesting to inquire into the mechanism of these results in relation to the etiology of gout. Our knowledge of protein metabolism is very far from being precise, so that I must crave your indulgence for any inaccurate statements that I may make. We may compare a cell, for instance a muscle-cell, to an internal combustion engine. The framework of the cell corresponds to the cylinder and piston while, in the protein material, in the interstices of this framework is produced the material the combustion of which gives the energy for the particular activity of the cell. When the explosive material is detonated in the cell, to produce muscular contraction by the nervous impulse arriving at the nerve end (the plug), it is broken down into CO_2, lactic acid and a protein of unknown constitution called myosin. Myosin and lactic acid probably are, with the aid of oxygen, reconstituted into the unknown explosive material, while the CO_2 is excreted by the circulating fluids through the lungs. For the manufac-

*Read before the Pathological Section, Royal Academy of Medicine in Ireland.

ture of this material, carbohydrates are necessary. This carbohydrate is under normal conditions obtained (a) from the carbohydrate material of food carried to the cell in the form of glucose or (b) produced from the fatty-acid element of diaminized amino-acids, aldehyde being a stage in the process of conversion of these into glucose. (c) In conditions of starvation and in such abnormal conditions as diabetes (but, here for a different purpose) the protein material of the tissues is broken down to produce this energy material.

The framework of the cell, corresponding to the cylinders and the piston, requires under normal conditions a very small nitrogen supply to keep it in repair, just as in an internal combustion engine it is only occasionally that the scored cylinder needs attention, and it obtains this nitrogen from amino-acids from the food. The ordinary break-down product of the wear and tear of the framework of the cell is creatin which, under normal conditions, is converted by enzyme action into creatinin which is further broken down into ammonia which is elaborated into urea. It appears that the nitrogenous breakdown product of the nuclear part of the cell is excreted from it as uric acid, but there is in the tissues a ferment which splits up the uric acid into urea and oxalic acid, so that the major part, under ordinary conditions of the metabolism of the nucleus, may be excreted as urea. Normally, in birds, the whole of the nitrogenous breakdown product of the whole cell is excreted in the form of urate of ammonia. In fever and abnormal muscular contraction, there is a very large increase of wastage of both, the nucleus and the framework, and a very great increase of the production from them of uric acid and evidently a failure in the complete metabolism of this product by the special ferment which ought to deal with it, with the consequent very marked increase of uric acid and urates in the urine. It is said that this special ferment for the breakdown of uric acid does not exist in man and in Dalmatian dogs. It seems to me hardly credible that such unique exceptions can exist.

It is generally considered that amino acids, produced by the intestinal digestion of protein, are carried to the liver and, there, the moiety of them which is unnecessary for the reconstruction of the frame work of the cells is diaminized, the resulting ammonia being built up into urea, which is excreted. It has been found, however, that this process is not confined to the liver—it also occurs in the other tissues, especially in the muscles, where the metabolism of the fatty-acid element has already been described.

Results of Abnormal Intestinal Function

In such diseases as rheumatism and gout, there are abnormal conditions taking place, produced by a chronic intestinal infection, the sources of which are streptococci swallowed from the respiratory passages or the buccal cavity and which lower the resistance of the gastrointestinal tract and allow the bacillus coli to get out of hand and become pathogenic, with the consequent probable increased activities of anaerobic organisms. There is not only an absorption into the portal circulation of the microbes themselves and their poisons, but also absorption of the abnormal breakdown products of proteins, and possibly also of carbohydrate and fats, with almost certain interference with these normal ferment oxidation processes, not only in the liver cells where they are specially concentrated but also in the tissues, for instance in the muscles, so that the condition of interference with the ordinary metabolism of the cells (such as occur in fever and overexertion) are present perpetually; diaminization probably does not take place normally and the tissues are flooded with too large an amount of amino acids and also with too great an amount of purins derived from food. In consequence, an abnormal amount of purins is produced not only by imperfect metabolism of the breakdown of the cell but also by the imperfect metabolism of those derived from the food.

What About Uric-Acid Deposits?

What is the cause of the deposit of uric acid in particular places, for instance in gout, about the joints and tendon sheaths and in the above-mentioned case at the site of the lesion in the kidney, with the consequent production of stone? There are two isomeric forms of urates, both monosodium urates, one soluble and the other much less soluble. The soluble salt can be converted into the insoluble, and it appears that the conditions necessary for this change occur in areas where the lesion is produced by microbes or possibly by other changes, as in the case described, the urate being probably precipitated from colloid solution. I know by experience that, if ordinary cases of gout are treated with antigens prepared from their gastrointestinal microorganisms, they react at the site of these lesions, indicating microbial infection and that, by immunization, these lesions can be cleared up and the whole condition cured.

To me, therefore, gout is a rheumatic condition complicated by the formation of abnor-

mal amounts of uric acid, with the conversion of the soluble urates into insoluble at the site of rheumatic inflammation.

Whether my theoretical interpretation of the process is correct or not, there can be no question whatever that, by immunization against microorganisms in the way I have described, the abnormal production of uric acid can be stopped and the inflammation of the joints and tendons and so forth cleared up. So confident had I become of this that I was able to give the patient, whose case I have described, a pretty confident assurance that I could get rid of the material which was making the stones, and my prognosis in the case (as you see) was entirely justified.

Finally, we must not forget the possibility that derangements of certain internal secretions may form part of a vicious circle. Pigs suffer from guanin gout, and it is interesting in this connection to remember the extraordinary derangements of protein metabolism, especially in the muscles, after removal of the parathyroids and in such conditions as tetany when they are underacting where there is a very marked increase of guanidin in the body.

Cancer of the Breast

A Study of 250 Cases in Private Practice

By L. DUNCAN BULKLEY, New York City

Senior Physician to the New York Skin and Cancer Hospital, Member of the American Association for Cancer Research, Etc.

[*Continued from May issue, p. 322.*]

Case 7.—Mrs. L. H., aged 36, was seen in consultation, September 20, 1918. For 14 months, there had been a tumor in the left breast, first the size of a marble, which had increased gradually, and, for the previous six weeks she had had darting pain, following a blow on the breast; this was more pronounced during menstruation. She had been receiving electrical treatments three times a week for nine months, also had been drinking a glass of radium water three times daily, and had been on vegetable diet.

When first seen, the left breast was greatly enlarged, with a hard mass 2 by 3 inches in diameter, with some adherent, reddened skin, and some axillary adenopathy. Several physicians and surgeons declared the case to be inoperable. Under careful diet and medication, she seemed to do well for a while. The breast was less swollen and red, and the patient gained a little flesh, to even more than her normal weight. But, on October 22, the supraclavicular glands were a little enlarged and the axillary glands possibly a little larger. As she and her husband were restless and wanted an operation, I consented to have Dr. Strobel do his "chemical removal," which went off well, except that the axillary glands were hard to reach, on November 1. That area was not skin-grafted until December 13. During all this time, the dietetic and medicinal measures were neglected. The grafts on the breast and in the axilla did not take very well, and, by December 26, there still was some rawness, and a swelling of the left arm.

After this, she picked up and, on March 1, I recorded that she felt very well; pulse 80 and good; regaining some flesh, almost her former weight, and went to her country home, being under my treatment. She then went West for several weeks, probably neglecting treatment, and several cutaneous nodules developed near the original site and on the back, with some supraclavicular adenopathy. For this, she received some radium treatment, with needles, by Dr. Janeway, and had repeated x-ray applications. Later, right axillary adenopathy developed. She then returned to her country home and I lost sight of her, hearing later that she died July 12, 1919. In this case, the medicinal treatment, which was followed out irregularly, failed to check the lymphatic permeation, and the extension of the latter put an end to her life.

The four other fatal primary cases which are here recorded (making eleven in all) were seen in consultation or only once.

Case 8.—Mrs. S. R., aged 68, seen in consultation, May 20, 1919, had had a lump in the right axilla for 2 years, remaining much the same till March, 1919, when she noticed a lump in the breast, which had since ulcerated. When seen, the right breast was the size of a half melon and very hard, with numerous ulcerated areas; she had always been very constipated, with no movement for a week at a time. She was advised thorough dietetic and medicinal treatment, which may not have been carried out. Her physician wrote me, that she died about November 30th.

Case 9.—Mrs. W. A. C., aged 52, seen February 9, 1922. For two years, had lost flesh, looking grayish, with obstinate constipation

and indigestion. The uterus was then found to be enlarged and bound down, and at the same time both breasts were affected, while axillary and supraclavicular adenopathy appeared. Then, two years ago, having uterine bleeding, she saw Dr. Kelly, in Baltimore, who found extensive uterine disease and, curetting the cervical canal, diagnosticated adenocarcinoma, giving her not six months to live. Several others gave the same diagnosis and prognosis.

She then had radium in the uterus for 24 hours; the uterus was reported softer and movable, and the bleeding stopped; she also had x-rays, 50 minutes each week, for a while.

Later, there was swelling of the abdomen and legs, and a leading New York surgeon opened the abdomen, removing about a gallon of fluid. He found all the peritoneum a mass of matted glands. I saw her but the once, and she died, April 26, 1922.

Case 10.—Mrs. S. S., aged 43, came to me, a single time, December 29, 1921, with a mass 3 by 4 inches in the right breast, hard and adherent to the skin, with nipple much retracted. She was greatly constipated, depending on medicine, and with scanty and red urine, passed at night. She was given appropriate dietetic and medicinal treatment, but I never saw her again. I do not know if she carried out the treatment, and on inquiry I learned that she was soon operated on in a hospital, and died on May 30th, 1922, after weeks of great pain.

Case 11.—Mrs. D. L., aged 44, came to me December 22, 1920, with a curious history. She had one child, a son, 19 years of age whom she had nursed 10 months normally, no abscess. She had always been healthy and active until about a year previous to her visit, when she became weak and heavy, with no ambition. Seeing her physician, he advised that the teeth be inspected by x-rays, and as a result she had all the upper teeth and lower back teeth extracted, quite interfering with perfect mastication, which is such an important element in impending cancer.

Four or five months previous to her visit, she had pain in the left breast, which was relieved by witch hazel. Shortly after, she noticed a lump in the breast, and an operation was urged, but rejected. The bowels were always sluggish, requiring laxatives several times a week; the urine was urgent in the day time and passed 2 to 4 times at night, and she had rheumatism; the menses were still quite regular, lasting 3 days, but recently they had appeared twice in a month.

When first seen, the left breast, especially the outer lobe, was involved in a great, hard mass, making it double the size of the other. It was painful, though not on gentle handling. On the lower aspect, there were two ulcerated cutaneous nodules, and many small red points on the side: the axillary glands were greatly enlarged, low down. She was placed upon appropriate dietary and medicinal treatment, and, on December 29, it was recorded that there was material improvement in the feeling of the breast, which was not so tense; and the cutaneous nodules were less red, and smaller. She had slept much better, taking none of a former sleeping medicine; the urine was not so urgent, and was not passed until 5 a. m., whereas formerly it had been 2 to 4 times at night. I did not see her again, but heard by telephone that she had gone to a hospital for a surgical operation. Later, upon inquiry, I learned from her husband that she died November 19, 1921, eleven months after I first saw her, only once. I had expected that the disease would yield, as others had done, to careful and prolonged medicinal treatment.

Fatal Postoperative Cases

It is not necessary to go into detail regarding the twenty-three deaths which diligent inquiry and large correspondence have discovered in the 75 postoperative cases, for they all have about the same sad story; but some of them were of peculiar interest, on account of the good fight which was put up. A few illustrative cases may suffice. There were undoubtedly many more deaths among the desperate cases which I saw in consultation, but my repeated letters have failed to elicit any more reports.

Case 12.—Mrs. B. E., aged 49, weighing 159 pounds, mother of 3 children, aged 21, 20, 13, was sent to me on January 25, 1917, by a leading surgeon of this city, four months after he had performed a very perfect surgical operation, clearing out the axilla, on September 27, 1916. The lump in the right breast, with axillary adenopathy, was first noticed five or six weeks before the operation. The breast tumor (which was removed) was the size of a large walnut, and was reported microscopically to be an adenocarcinoma. She had long been persistently constipated, depending on cathartics all the time, the digestion was poor, with continued flatulence, and she had insomnia to 2 or 3 a. m.; the menses had ceased 5 years ago.

When first seen, there was a good scar, from a complete operation, including the axilla,

but there were still some small, enlarged glands; she complained of pain and aching, and the arm, which was enlarged, had some tender areas. She was placed on rigid diet and medication, but a month later it was recorded that there were cutaneous nodules around the scar, with an area of redness near by, such as is often seen in recurrent cases. Within two months, all these and the axillary adenopathy had increased. The urinary secretion was found, from the first, to be very deficient in the solids called for by the body weight, only one-quarter of the normal amount being eliminated, and the urea was very low. This was, more or less, the condition for some months, but by very active treatment all this was raised to normal.

She was a very intelligent and faithful lady, coming weekly from a neighboring town and, for some time, seemed to do well under varied treatment to meet existing conditions, while maintaining the proper dietetic, hygienic, and medicinal measures. In spite of all, however, cutaneous nodules kept appearing (although very slowly), as also some adenopathy, which painting with 50-percent ichthyol and x-ray treatments seemed to control. On October 25, it was recorded that she felt very well, had a great appetite (for the "green-card diet") and "sleeps wonderfully with no nocturnal urination," with which she had been formerly troubled. She never took morphine or any opiate. On November 28, there was still "very great improvement," the cutaneous nodules had gone, also certain areas of diffuse redness which had appeared, and the enlarged glands in the axilla were less, being hardly perceptible" on January 8, 1918.

But, the fatal lymphatic permeation persisted and, by April 16, 1918, a new enlarged gland was found low, behind the axilla; also, a bony infiltration appeared near the sternal end of the incision, associated with considerable pain in the right shoulder and arm. The patient had kept her weight pretty well up to this time; but now she began to lose. Under change of treatment, she picked up, the urine improved materially, the urea rising up to normal, and it seemed as if she might pull through. Then, slowly, the supraclavicular nodes became involved, and those in the neck, and back, for which radium tubes were inserted by Dr. Janeway, but without appreciable benefit and causing much pain. By November 15, signs of intrathoracic invasion were manifest, with shortness of breath, cough, and distress, and the chest was tapped several times, large amounts of fluid being removed, up to 72 ounces. She finally passed away on January 19, 1919, two years after her visit, and two years and four months after the operation.

While the ultimate result was not such as was hoped for or even expected by the surgeon who performed the relatively early and complete operation, the case illustrates well the distressing features of the disease, and the practical impossibility of surgery reaching all the invaded lymphatics, and the spread of the disease by the traumatism to lymphatics and blood vessels during the operation. From long experience, it seems that most careful dietetic, hygienic, and medicinal measures might have removed the first small tumor, as in the many successful cases to be mentioned later. It was, however, a comfort to have the patient's husband, an unusually intelligent gentleman, write to me, when announcing her death, "I am fully convinced that you have added considerable to her life in comfort and length of days."

Case 13.—Mrs. G. C., aged 46, with 3 children (23, 22, and 17 years old), noticed a small lump in the left breast, three years before first seen, October 5, 1918. This was removed surgically in February, 1917, the wound not healing for ten months. Four months before she came, axillary adenopathy developed, and a small hard mass formed in the middle of the operative scar. She had always been constipated, depending on medicine, and the saliva was found to be acid. The menses were still regular and normal.

When first seen, there was a flat, hard mass, 1¼ inch by 1 inch, with darting pain in it, with two almond-size glands in the axilla and some indefinite nodes in the pectoral fold. One month after her being placed on full dietary and medicinal treatment, it was recorded that she "felt much better", and the axillary nodes were smaller and movable. On December 21, it was recorded that she "feels better all the time", the mass which was in the middle of the scar was gone, the axillary nodes were smaller and she had no pain. On February 13, 1919, she still felt very well, except for some neuralgic pain in left shoulder to elbow, and the axillary gland had enlarged some; the saliva was still acid.

After this, she failed some and, on June 11, she complained of great pain in the right side of the sternum up into the shoulder and neck, which was relieved considerably by aspirin and x-ray. On October 30, she "felt fine this week," the sternal lump was smaller and softer, as was also the axillary gland. She had

several profuse menstrual periods; then the menopause occurred and she began to run down. The sternal mass ulcerated and gave distress, the axillary nodes increased in size, and she failed in strength. Before this, she had been up and very active on account of a daughter's illness. Soon, she could not come to the office from her home in New Jersey, and a friend reported often that she was steadily failing. On September 10, I called on her and found that she had considerable jaundice, but there was neither enlargement of the liver nor did it show hard edges. There was still considerable ulceration on the chest. I afterwards learned that she had morphine hypodermically for the last three weeks of her life, which ended October 24, 1920, two years after I first saw her. While the disease was fatal in this instance, life was undoubtedly prolonged long after the time when it would be expected to end, while the comfort and activity of the patient during those two years was most gratifying.

Case 14.—Miss S. M., aged 37, fell in May, 1916, striking the right breast. Three months later, she noticed a lump, the size of a pea, which increased, with the development of enlarged axillary and supraclavicular glands; there were attacks of shooting pains. On October 1, 1917, there was a very complete operation performed, the mass the size of a large English walnut, including the axillary and supraclavicular glands being removed.

When first seen, January 28, 1918, the operative area was still denuded over a large surface, the grafts not having taken; this was being dressed surgically every other day, which dressing was continued by her surgeon for two weeks, with very great discomfort. Being placed on a complete medicinal treatment, and the surface covered with a calamine and zinc ointment, spread on thin absorbent cotton, changed twice daily, the relief experienced was immense, and within three weeks it was recorded that the ulceration had completely healed.

But, some small cutaneous nodules had appeared, around, which subsided under the continuous application of thiol, and occasional x-rays. However, the supraclavicular glands again developed, as also an axillary gland, though, on June 26, it was recorded that the enlarged glands had gone down.

The patient had been very nervous since the operation, and various remedies had been employed with success, so that, in spite of a very hot summer, it was recorded, on August 28, that she looked and felt very well. But, on September 12, the left breast was found involved, with an irregular, nodular mass 1 by 2 inches in diameter, with pain also in the right breast and side, and some cutaneous nodules around. By September 6, the left breast was more involved, with axillary adenopathy. Iodide of lead in diachylon ointment was kept over the left breast, on absorbent cotton, and on October 10, it was much softer. I then lost sight of the patient for a while. In response to a letter, she wrote, on December 22, that she had been much better and so busy that she kept putting off the appointment. She promised to call shortly, adding that she was sure that I would be pleased to see how much better she looked, having gained quite a few pounds.

But she did not call, neglected treatment, submitted to some proteal injections, and took some quack remedies. On February 22, 1919, I was asked to see her at her home. I found that she had been in bed a month, ever since she had wakened at midnight with a spasm in the right leg, for which she had had morphine hypodermically. There had been much suffering since; the sole was very painful to the touch. The cancer had made bad progress. The *left* side showed multiple cutaneous nodules. The left breast was large and solid, with cutaneous nodules and much erythematous redness over and around it in patches. The right and left axillary nodes were large, and also the right supraclavicular. She died shortly thereafter without my seeing her again.

While the ending of this case was unfortunate, the patient had been comparatively well for nearly 12 months, carrying on a very active business of her own, as a hair dresser, and it was only when she neglected treatment and tried other measures that the fatal lymphatic permeation carried her off, in two short months.

Case 15.—Mrs. F. L. E., aged 62, first seen October 20, 1917. Two years previously, in June, a small lump, the size of a walnut, was noticed in the left breast, close to the nipple, which was drawn in within a week. The breast was amputated almost immediately, early in June, 1915, with a thorough, axillary operation. The microscopical diagnosis was, carcinoma. In July, 1917, a lump appeared over the left clavicle, the size of a bean, which was removed the next day, and was also shown to be carcinoma, under the microscope. There was no trouble until October 1st, when sharp pains were felt in the left shoulder and in the left clavicular region

from the joint to center. The patient had had rheumatism off and on for years, and it had been disregarded. Recently, two glands were discovered to be enlarged, above the clavicle, and I was consulted with a hope of averting serious recurrence.

On examination, a very good scar from the operation was found, extending into the axilla and along the arm; also the scar from the removal of the supraaxillary glands, the previous July. There were found two enlarged glands above the clavicle and a small one in the left axilla. The patient had always been greatly constipated, depending on medicine; had bad digestion, with gas; the sleep had been bad for years, with long periods of wakefulness and disturbed by frequent urination; the saliva was very acid. She was said to have diabetes; but no sugar was discovered, after several analyses. The urine (sp. grav. 1018 to 1020) was strongly acid, and scanty, averaging 25 to 28 ounces, by measure, daily. The patient was a large woman.

Being placed on complete treatment, she felt better in two weeks, with less pain in the left arm. However, there was a shortness of breath on ascending stairs, and a mitral murmur was discovered. A later analysis revealed almost 3 percent of sugar in the urine, and she left for the Pacific Coast a month after. I learned that she died of diabetes, fostered possibly by the carbonaceous diet given for the cancer, in August, 1920, nearly three years after I first saw her.

It would be useless to narrate the histories of more patients, showing the further results in the 75 postoperative cases, but a brief mention may be made of the duration of life after operation in the cases which have passed under my observation, where the date of the final result could be ascertained. Of the 75 patients, 6 died within one year, 4 within 18 months, 1 within 2 years, 3 within 3 years, and 4 at unknown times; of the 12 thought to be living, there are, under 1 year 3; over 1 year 1; 2 years 3; over 3 years 3. Finally 45 were lost sight of.

[*To be concluded.*]

Practical Experiences With Non-Specific Protein

By O. AHLSWEDE, London and Hamburg

IT IS common knowledge that protein substances, introduced into the system parentally (intramuscularly or intravenously), provoke general or local reactions. The species of protein introduced is of secondary importance, a certain therapeutical success being attained more or less with all proteins. Injected into a muscle, a vein, and acting in the manner of a "foreign body", the proteins stimulate the defensive reaction of the body.

This becomes very distinctly clinically visible in most dermatoses. Thus, following an intramusclar injection e. g. of a sterile and toxin-free milk albumin solution, a skin lesion, such as a sycosis barbæ or crural eczema, will develop increased reddening and swelling; in fact, it will show symptoms of a reactive inflammation. In the case of an eczema, e. g., the patient will commonly note, some 6 to 8 hours after the injection, a "ticklish" feeling, a sensation which he did not feel before the injection and which indicates that some reaction is going on.

As the theory of non-specific treatment is not to be discussed here, it may suffice to add that the principle involved is, to stimulate the defensive reaction of the system to its maximum against invasion, no matter whether a streptococcus, a trichophyton or a gonococcus, etc., is the intruder. As, furthermore, the practical therapeutical success attained proved as good as and, in many cases, better than those attained by specific agents (streptococcus vaccines, gonococcal, trichophyton vaccines, etc.), the principle must concern a very large number of diseases, in fact an almost unlimited line of indications. Thus, Schmidt, Kraus, Saxl reported successful treatment of progressive paralysis, neoplasms and joint disorders with toxin-free milk-albumin injections; Müller and others saw a beneficial influence in a large number of dermatoses, in gonorrheal complications, etc.

The growing importance of this method of treatment will justify drawing attention in the following to some practical experiences in non-specific foreign-protein treatment with a 5-percent sterilized casein solution. The first therapeutical success concerned the treatment of buboes. Of 19 cases treated by intravenous injections of casein (intramuscular injection was chosen in cases with too strong reaction) a rapid absorption of the developing abscesses was attained; thus rendering surgical

incision unnecessary and also considerably shortening the duration of treatment. The two refractory cases were too advanced to prevent perforation. The injections were made every other day. Starting with 1 Cc. of a 5-percent casein solution, this was increased by another Cc. on every following injection till 5 Cc. were injected. Slight rises in temperature and occasional slight headaches were the only disturbances seen. In all cases, as early as after the first two injections, the painfulness and tension in the buboes were considerably lessened. In advanced buboes near perforation, 2 to 3 injections allayed the inflammatory symptoms. The skin sinks and, after another 2 to 3 injections on an average, regains its normal character. The inguinal glands also become normally palpable. In less advanced buboes, the healing process was much quicker. Nor were any relapses noted.

Similar success was attained in 11 cases of epididymitis and prostatitis gonorrhoica. In epididymitis, the successful result was distinctly visible. Following 2 to 3 injections only, of casein, in 7 cases, the swelling and painfulness of the inflamed parts were diminished. In prostatitis gonorrhoica (11 cases), the success was doubtful. Though pressure and swelling were improved, leucocytes could always be found in the discharge. Here, the casein injections appear to have neither more nor less influence than the specific gonococcal vaccines themselves. The same holds true with regard to the treatment of furunculosis and carbuncles. In 30 cases treated by casein injections (compared with 25 cases submitted to topical measures only), the softening and elimination of necrotic tissue was quicker than after mere local treatment.

Similar benefit was derived in 12 cases of chronic relapsing eczemas. These responded to casein by a strong topical reaction: inflammation and exudation.

It seems very probable that the introduction of protein-substances increases the lymph current besides affecting an accumulation of leucocytes. Of the 12 cases mentioned, 8 were cured exclusively by casein injections while the other 4, having proved refractory to topical treatment alone, were cured by a combination of both methods.

Of acne vulgaris, several cases responded exceptionally well. The method of treatment was the same as given. While the first injection caused a distinct local reaction in the papular eruptions, two to four subsequent injections effected a marked regression of the nodules. Of 9 cases, 4 were cured exclusively with casein injections. In the other cases, a combination with topical measures proved necessary. In acne rosacea, little success was obtained. The pronounced hyperemia and new-formation of vessels resisted the treatment. Four patients with genital and peritoneal tuberculosis responded well. The temperature was lowered and the general condition improved after three injections. However, further observations will be necessary before a definite opinion can be formed.

How to Explain the Results

As to the theory of non-specific protein treatment, a definite explanation is still lacking. An effect due to increased phagocytosis, which was first thought of, is out of question, as the therapeutic success is independent of the number of leucocytes. Weichardt speaks of an "activation of the protoplasm" *(Plasmaaktivierung)* meaning, a stimulation of the cellplasm. This increased activity of the body cells can be effected by albuminous substances or their decomposition products following parenteral (intramuscular or intravenous) injection into the system. In fact, in animal experiments, it has been possible to trace the formation of antibodies, by means of the complement reaction. The strength of this reaction was in proportion to the number of casein injections made.

Summarizing, it appears advisable, from practical experiences with non-specific protein treatment, to apply this method in all those cases in which specific vaccines must be thought of; furthermore, in the almost unlimited field of those disorders where the system requires a support in its defensive action. If careful dosage is observed, disturbances, such as anaphylactic symptoms, can be practically eliminated while a certain therapeutic benefit is always certain to follow.

"Standardization"

By GEORGE BLYTHE MORRIS, Goldsboro, North Carolina

IN a certain training camp, during the late war, a little episode occurred, news of which never reached even company headquarters. It seems that a cadet-sergeant doctor went into a barracks and spoke rather reprovingly to a cadet-private doctor, whereupon the cadet-private doctor turned and pasted the day-lights out of the cadet-sergeant doctor. Whether the story was exaggerated or not, we do not know. We think that it probably was. However, something took place between the two to give the story some foundation, because, at mess formation, the cadet-top-sergeant doctor admonished the company of cadet-doctors, saying: "You must not take offense at these little things; they are only a part of the polishing process."

At this juncture, a pot-bellied cadet-private doctor, who wore a mustache and not a misplaced eyebrow, whispered from under the left end of this mustache to the cadet-private doctor next to him, with whom we are intimately acquainted, "Who the hell are we supposed to be like when we git polished—like him?" At this remark, the doctor-private with whom we are intimately acquainted giggled outright in ranks and was glared at through the pince-nez of the top-sergeant doctor for being very naughty and for not taking the top-sergeant doctor and himself seriously as soldiers.

Of course, we do not uphold insubordination in the U. S. Army. Some of us got nowhere "much"—not, because we were insubordinate, as we might have seemed to the casual observer, but because some of us had in us too much innate Americanism to kiss the pontifical toe for a mess of pottage. [*Metaphors mixed?*—Ed.] And if that be treason, eat it.

Of course, we expect nothing better than, some day, to be "bumped off" in the cause of true American Democracy, and we think that we already know by whom. (And, if *that* be treason, eat it.) But, of course, too, we would rather have been where we were during that period (And we are ready to go again should congress ever find it necessary to call upon us) than to have been at home with certain brother practitioners within the draft age whose rejection enabled them to mop up, perhaps, about thirty thousand more pieces of silver than one, named Iscariot, received for causing all the trouble on earth, World's War included. It was not our privilege to augment the crimson of the poppy-fields, neither did we stay at home to capitalize "The Flu"; which could have been our choice. However, we seem to drift from our subject.

But, About Standardization

I relate the foregoing pleasant little incidents—including such a one as The World's War, as illustrative of what is to follow.

Rarely can one pick up a medical journal, these days, without coming upon some article by some author who has arrogated to himself the status of "The Great", in which article said self-constituted dean writes on "Standardization" or "Reform", meaning that he has some fault to find with those of his brethren who are not band-wagon riders among what he would designate as the rank and file.

What we wish to know is "Who the h . . . are we supposed to be like when we shall have become standardized—like him?"

We know that this paragraph is rank and blasphemous heresy. So was The Boston Tea-Party, and so was also the "Hill that was raised at Bunker-hell".

Out of heresy was born America, and, when the "true fabric" gets "fed-up" on the oligarchic plagiarisms of self-constituted authority, out of heresy will be born an American Medical Profession. Heresy, the soul-democratizing influence! The very matrix of progress! The abortionist of tyranny! The iconoclast of arrogance! The voice of a free people 'gainst self-knighted peerage! The same sort of stuff that made the lowly Nazarene (whether we believe in this divinity or not) stand up in the very teeth of the Roman Empire and that forced the lonely monk at Worms to stand up in persistent opposition to the Roman Papacy.

I see upon my desk brochures from various publishing houses. I see also various brochures advertising the use of various scientific preparations, appliances and instruments; and, in my book-case, I see a volume which is a classic—a rule and guide as a medical-school textbook.

We of the "rank and file" are not qualified to grasp the literature advertised to us? The publishers who advertise it to us should depend upon those who would have us "standardized" for the volume of business that they (the publishers) do?

Delivered before the Wayne County (North Carolina) Medical Society, in January, 1923.

The scientific preparations, appliances and instruments, we are not qualified to employ with all our diplomas, regular licenses and and experience? Only those highly specialized in their several and respective uses should be permitted to employ them, and their manufacturers should depend upon only "the standardized" for the volume of business that they (the manufacturers) do?

The classical textbook written by a world authority, we must swear by. In it, a percentage mortality is figured out as infallibly as any actuary ever calculated anything, and I know doctors in certain rural districts, who, before the Volstead Act, would have been tarred and feathered, if not lynched, had their proportionate mortality even approached that laid down in this book for certain diseases.

Do those who would have us standardized have any influence with the various state committees on medical legislation, with whom, at society meetings, they seem to be on such intimate terms? Do they think, for a moment, that, had "the rank and file" any influence with these committees, coming generations would be born assisted by the infected (sometimes, even infested) talons of negro midwives, amid such aseptic environment as urine-soaked "crazy-quilts" and vulvæ besmeared with feces? Do they regard the least qualified of the "rank and file", below the plane of these hags?

Should we, who have not been specially autocratized and specially guilded, dare to cut a furuncle, when the collaborating epidemiologist of my state writes me, in this year one thousand nine hundred and twenty-two, and in this era of scientific thought, that "all that is necessary for a person to become a midwife is, to register with the State Board of Health?"

Fancy, for a moment, this absurdity: That they (the standardizers, themselves) and we (of "the rank and file") could come up to the requirements laid down by them—all of us as perfect as they already believe themselves to be. Upon what would these standardizers feed? Upon reference cases from the rank and file? Upon prostration at their feet of those admittedly their equals?

The writer recalls a pen-and-ink sketch of a long time ago. It was by Gibson. A newly-rich man had employed two rival tenors of equal renown to sing at a musicale given in his drawing-room. Indelibly impressed upon my memory is the look of devotion that each tenor bestowed upon the other.

We see similar illustrations almost every day in ordinary life. Two clergymen, for example, of equal eloquence, but of different denominations, wrangling—and, in the name of Christ.

Is it so that, at one time, it was said by textbooks and professors that the extirpation of a certain ductless glandular structure would be fatal? It strikes us that this was once so, though we do not assert it as a surety.

Is it so that two master-major-surgeons were successfully extirpating this glandular structure in the face of orthodox teachings, while scarcely enjoying the ethical regard of the standardizers, by whom they were spoken of as mechanics in human flesh? This is merely a question—not an assertion.

Is it also true that, when they noted that their audiences were leaving the classic centers and "westward wending their way", these standardizers did not hasten to shower recognition and honorary hoods upon these two lowly mechanics? This, neither, is an assertion.

Suppose that Ambrose Paré, Harvey, Hunter, Jenner, Ephraim McDowell, Crawford Long, Lister had bowed before the mandates of orthodox standardization. Lorenz, von Ruck, Harrower, haven't bowed yet, either, and we do not think that they will. [von Ruck has passed away. He never did kowtow to anybody.—Ed.]

Suppose that civilian influenza had been treated with the routine capsule of the Army Armamentarium. Who would have been left to feed those of the Army who escaped the treatment? When a captain, we were bawled out by a major for having something to say about the Army Armamentarium. We were guilty of heresy and, from the way he chided, guilty with a large helping of schism "thrown in". But the undertakers did not cease to ply their uncanny trade.

The treatment was "Standardized".

Theory or Practice?

Should the weather-beaten pioneer, who clatters onward in his tattered Ford and who can smell his pathology the moment he enters the room, be standardized by being compelled to arrive at the same conclusion in two weeks' time, with retort, buret, test-tube and microscope; or by being compelled to send for a standardized hematologist to make a leucocyte count that it may be determined whether or not his patient should take a long and arduous journey—and perhaps a dangerous one—to some center of standardization, that he or she might have that appendix, which is on the eve

of bursting, or those pus-tubes, scientifically removed instead of going in and getting them in his own little local hospital?

Once an old doctor told us that eyes were made before microscopes; ears before stethoscopes; fingers before pleximeters; and brains before laboratories. After twelve and a half years of practice, we are just beginning to realize that he told us the truth.

Should the old patriarch, who still drives the horse, be standardized or chloroformed because he is past sixty and because, out of some two thousand obstetric cases, which he designates "Midwifery", he has never lost a mother—eclampsia (ante and postpartum) included, because he *should* have lost a certain percent "according to Hoyle"?

We admit that the reticence and the modesty of the socalled "rank and file" are largely responsible for the state of political conditions in the medical profession. We admit an unforgivable lethargy on the part of the real "warp and woof" of the profession and a disposition to "let George do it". But, can George honestly say that it is his sincere desire that remote and obscure talents be exhumed, rather than a fear on "George's" part that some voice might come out of Nazareth in spite of him and appropriate some of the thunder over which he thinks the Doctors (already) in the temple hold exclusive and inalienable proprietorship? Hence this hue and cry intended for nothing but to publish the contrast between the standardized and the unstandardized.

Were prohibition a success, the prohibitionist would be out of a job. Should the rank and file come up to the "standard", the standardizer would be out of a job. It is not our opinion that either desires that his goal be reached.

The Old Family Doctor

I can picture in my fancy an old doctor. He is a composite sort of an old man. His features seem to change as I behold him in my mind's eye—yet, they do not seem vague. Also does his figure seem to change. Now he is heavy, tall and athletic; his face is florid—almost plethoric. His bald head is fringed around with snow-white fleece. He is clad in an old crash suit which looks like it had first been wadded up, then flung upon him. His voice is like thunder when he bawls at the swain who has come to him to ask what must be done about the ruined lass; but, to the lass, it has the tenderness and the sonorous sweetness of a benediction pronounced by an infirm bishop. Everyone says he drinks.

When the two go out, I hear a sound in his back-office like the rushing of many waters. Intruding, I find him where I never had believed he had been—upon his knees, his face hidden against the old leather couch sobbing to whatever or whomever he believed in "up there", about the frailties of two of his young sheep whom he had helped bring here and for whose welfare he feels responsible all the days of his life.

Again, and his features are aquiline. A goodly bunch of snow-white fleece covers his head—or perhaps it is iron-gray. He wears a well-trimmed mustache and imperial—or maybe side-whiskers. He is clad in a black frock-coat this time and is raw-boned, but dapper in appearance. Now he is a little stooped; now straight as an arrow. His steel-gray eyes are as stern as a cavalry-sergeant's, but they twinkle somewhat when he storms at the imprudent little mother, and he has some trouble in getting his hand, which she clings to, away from her without wounding her feelings, as she smiles wanly and worshipfully up at him.

His features, figure and dress change rapidly in the kaleidoscope of my memory, yet there is ever an indescribable sameness about him.

When he sits down to storm at the family, the superannuated setter leaves his cozy spot on the rug before the fire and ambles up to him, resting his chin upon the thunderer's knee. The old cat begins to pace back and forth rubbing herself against his trouser-leg while giving vent to a noise not unlike that rendered by a hard-drawing pipe in the stem of which "goo" has accumulated; and, while he sits, some "little party" in the family, wise to the fact that the thunder is only "stage-thunder", climbs into his lap and, with chubby arms around the leathery old neck, lays his ringlets against the stern face (which has never been able to buffalo the "little party") and falls asleep amid the storm. When this has subsided, the little party is tenderly laid upon the bed with the little mother and the other little pink parcel and, with a volley of expletives directed at the frailties of human nature in general, the fountainhead of the tempest dashes out to untie the old horse, who (we cannot designate his horse with the pronoun "which") slobbers affectionately upon the shoulder and sleeve of the frock-coat.

The old shepherd who knows his sheep and is known of his, though as profane as a sea-cook's parrot (and as meaninglessly profane) is, withal the most Christ-like man who lives

in the reaches of our memory.

He believed, in his time, that "respectability" was a "barrier to the gonococcus". He knew that it was.

He did not believe that the world was "more nearly syphilized than civilized."

He had an ideal in womanhood; he revered that most consecrated calling on earth and would not countenance its being made traffic or gossip of—the calling, we mean, of the trained nurse—of the sisterhood of the father-confessors to the clergy.

He does not practice any more. Yet, he still lives to some of us.

Can You Standardize Personality

Would someone have him "standardized"? Would someone make of him merely a mechanic on human flesh, destroying in him the personal equation which is part and parcel of his patient? Should his fingers be sterilized of that greatest of therapeutic agents, the human touch? Is any miracle that can be wrought with drug or scalpel comparable to it in healing influence? Would anyone choose to take him out of his provincial niche which he alone can fill and put in his place a standardized "morgue-rat" or an artless laboratory "squint-hound"? Would you have fellowship given him in some exclusive guild, so that the young theorist graduate, whom he is training to perpetuate his art, fear to approach him?

It does not stand to reason that The Great Physician chose to come as a carpenter's apprentice that he might act as an autocratic obstructionist to his brethren under the guise of standardization. Nor did the miracles he is said to have wrought constitute the most marvelous side of his character. It was the human touch which he possessed that did.

The writer is not an old man in the profession and not yet middle-aged in years. Therefore, be advised that he does not believe in useless empiricism to the exclusion of modern things. Nor does he believe in modern fol-de-rol and uncertain experimentation to the exclusion of useful primitive things.

When we graduate, we are materialists, strictly. After we have practiced long enough to forget our elementary zoology, a great light downs upon us; we realize that there are more things in heaven and earth than are dreamt of in our philosophy, wonderful as we may have been when we were permitted to begin practice.

Don't worry, though, ye "standardizers", about your superannuated brother. If that story about "the place upstairs" (the existence of which some of us loudly proclaim with our lips, yet seriously doubt in our hearts) is not entirely a myth, he's been standardized, all right. And, if it is a myth, he left a little more than most of us usually do—a little more than the wreath of roses to be withered on the day after he embarks upon the journey the destination of which may not be; he has left a portrait painted by himself. And, his pigments he mixed with the same sort of stuff with which Sir Joshua Reynolds mixed his, —That is, for other folks he did. But, for himself—well, he just didn't have the time with all the other things he had to do to use his brains for himself.

But he's standardized. Gentlemen of the self-knighted peerage of the Medical Profession of this Republic—He's STANDARDIZED.

FOR THIS I PRAY

O, Lord,
Give me work to do.
Give me health.
Give me joy in simple things.
Give me an eye for beauty,
A tongue for truth,
A heart that loves,
A mind that reasons,
A sympathy that understands,
Give me neither malice nor envy;
But a true kindness
And a noble common sense.
At the close of each day
Give me a book
And a friend with whom
I can be silent.

Mrs. Scottie McKenzie Frasier,
Dothan, Ala.

The Law and the Profits

By ELIZABETH C. FITZ SIMONS, Pittsburgh, Pennsylvania

THE roar of the March wind prevented Dr. Lockhart from hearing the opening of his office door; but the bang with which it was closed caused him to look up from the evening paper.

"Glad to see you, Hains," he cried, "I'm trying to catch up on this trial—been so busy lately! Aren't you nearly through with it?"

"Yes," answered Hains, who was counsel for the defendant, "the case will very likely go to the jury tomorrow."

"And will the jury acquit Stevens?" asked the doctor.

The lawyer, with a slight sideways motion of his hands, answered:

"You can never tell what a jury will do."

"Brunner was a fine bookkeeper, was well liked and one of the last men in the community that one might expect would have such an enemy! What was the motive?"

"Another case of Ahab and Naboth," answered Hains, "Stevens wanted to buy some of Brunner's stock in the iron works, and Brunner wouldn't sell. And Stevens says he put half a grain of arsenic in the glass of water that Brunner always kept on his desk —he was a great water drinker—There was to be a meeting of the stockholders that afternoon, and he wanted Brunner to lose his vote and influence by being too ill to attend the meeting."

"Didn't the chemists find that he gave twice that amount?"

"Oh, yes, there was a grain of arsenic found in the stomach. The testimony shows that he bought half a grain twice. At noon on the tenth of December, Stevens went to Cook's Pharmacy and bought a bottle of clam juice, two pounds of castile soap, and half a grain of arsenic."

"Who gave him the prescription?" interrupted the doctor.

"He told Fred Cook he wanted to use it in making up a recipe he had for rat poison, and Fred made no bones about giving it to him. Then he went toward his home, and, in crossing the railroad track, hurried to avoid the 12:28 express, let the package fall and, of course, the bottle broke. Then he went back to Cook's—taking the bar of soap with pieces of glass sticking in it. He laughed about it, and told Fred Cook to hurry up and refill the order, all the time joking about one thing and another. Fred supposed the arsenic was destroyed, too—if he thought at all! Old Kasper Cook would have demanded to see the damaged arsenic before so" . . . more."

"Was that the way? I had not heard it all connectedly. There is so much sickness, this winter," remarked the doctor, rising to answer the telephone.

"This is Dr. Lockhart."

"....."

"Reduce the patient's temperature, Miss Wilkins. Give the other medicine and call me up in an hour; I will come out if need be." As he resumed his seat, he remarked, "Another of Thomas Grove's children has typhoid fever—pretty serious case!"

"This is an awful night to drive over there," replied the lawyer.

"I will walk if I go, it isn't fit to take a horse out tonight."

"Doctor, if you had been called at once, when Brunner drank the poison, would you have given the remedies that are directed to be given in these 'first aid' lists one so often sees?"

"No, I would not. Those things are the best that can be used by the laity and are likely to be at hand. But a physician knows how to use antidotes that are not to be found, ordinarily, outside of his supplies, and that would not be safe or successful in the hands of inexperienced persons."

"Ah! I see. Hydrated oxide of iron, being insoluble, would be harmless in one's stomach?"

"Yes," answered the doctor, "but Brunner had no one to do anything for him."

"No, of course; there was no one to do anything for him. He was quite alone all afternoon. When Stevens left the drugstore, he went back to the office and got his umbrella. Coming out, he met Brunner returning from his lunch. Stevens went home and stayed until four o'clock, when he went to the meeting of stockholders."

After a few moments' silence, the doctor remarked, "This is going very hard with Mrs. Stevens. Her life has not been happy since her second marriage. Although Stevens is worth a million, he is very close; their housekeeping expenses are managed with rigid economy."

"Is that so? He has not been at all close in the fee he has agreed to pay me in the

event of his acquittal."

"No, I would suppose not. But it is a fact that his step-daughter makes her home with her father's people in England, on account of his stinginess. Mrs. Stevens should certainly now have the comfort of having her daughter with her, but she has insisted on keeping her in ignorance of this whole affair, and is using every bit of strength and courage she can muster to keep up until a verdict of acquittal is rendered. If it should be the other way, the shock and the disgrace will kill her—and I have yet to hear one person express a hope for Stevens' acquittal!"

After a few moments' thought, the doctor referred to the intense feeling and interest shown by many friends and relatives of Brunner, adding: "This afternoon as I returned from visiting a patient a few miles south of town, I met perhaps a dozen sled loads—Brunners, Hufners and Diebolds, returning from court."

"Yes," answered Hains, "they are very fierce! There should have been a change of venue. But, in all the testimony, there is nothing to prove that Stevens put all the poison in the glass of water on Brunner's desk—Doctor, we can save Mrs. Stevens' life by proving that even a grain of arsenic will not kill a man."

"Why, man! We know that it will."

"Now, see here, Doctor, a lawyer has to know something of a good many occupations beside his own. I have studied this question pretty carefully, but I need your assistance. I cannot venture alone. I will fortify myself thoroughly with hydrated oxide of iron and then take a grain of arsenic in open court."

"Oh no, my boy, you won't run a risk like that! We must make 'every lawful endeavor for the preservation of our own life and the lives of others', but we are not required to save the life of your client by risking your own, and this scheme of yours does not strike me as being 'lawful endeavor', either."

"It's a bold stroke! but you are willing to set out this stormy night, cold, windy, icy—'not fit for a horse', you will risk life and limb for your patient—your client, and this plan of mine will save my client, and Mrs. Stevens, also. Brunner's family is not disgraced by the manner of his death; but, if Stevens is hanged, his innocent family will be disgraced for generations. Why, those relatives of Brunner's have made up a purse of fifty thousand dollars as an additional fee for the attorneys who convict Stevens."

"Listen to me, Hains; you have no call to do a thing like that. It is a fact that we know the effect of one drug upon another, and in an emergency use them with much success, but we aren't hunting for trouble. As I said before, I have not been able to keep up with this case connectedly, but I know that the Commonwealth proved the finding (under Brunner's desk) of two wrapping papers, one with the printed label 'arsenic' on it, and the other with 'arsenic' written on it, and Fred Cook identified both as having been used by him in putting up the arsenic he sold to Stevens."

"I know all that, Doctor, and I tell you, this course I mean to take is the last turn I can make in my effort to save my client. We both know that hydrated oxide of iron is insoluble, and, combined with arsenic, produces oxide of arsenic, which also is insoluble and therefore harmless. In saving the life of Stevens—even if he is guilty—Mrs. Stevens' life is saved and much embarrassment removed from their large connection of relatives, not to mention the happiness of Alice—Miss Hinckley," he hastily corrected.

"No, you're wrong there; Alice Hinckley does not care a rap for her step-father."

"Well, Doctor, am I to go it blind, or will you see me through?"

"If you are determined to run risks, Hains, I suppose it becomes my duty to see you through and prevent you from sacrificing your life," answered Dr. Lockhart, reluctantly. "You will have no one to prepare this for you, and I'm afraid that in your excitement you may make a mistake."

Taking pen and paper, he wrote, and then, bringing a bottle from a medicine chest, gave it to Hains, saying, "Now follow exactly these directions; here is all you need."

"Thank you, Doctor; I think you will see this matter in a different light later," Hains replied as he turned up the collar of his overcoat, picked up hat and gloves. He bade the doctor good-night, and, on reaching the door, paused to say: "The weather is moderating fast; we'll have rain tomorrow."

* * *

In the middle of the following afternoon, as Dr. Lockhart returned from visiting country patients, his mind turned again to Hains—their conversation, his firm determination to save his client. Two questions had alternately and persistently presented themselves ever since Hains left him the night before. "What was, really, Hains' object?" and "Did I do right in helping him carry out his scheme?"

Coming slowly toward him were several

vehicles. The rain had worn away the ice and snow in patches and the sled runners bore hard on the rough, frozen earth. At length, the doctor turned aside to pass a sled load of people, and recognized a family of Brunners.

"Court adjourned so early?" called the doctor.

"No," answered the man, "We had nothing to stay for any longer an' we're going home to get the chores done early tonight. Get up Pete—Bill!"

"Why didn't you tell the doctor about it?" a woman asked, before they were out of hearing.

"I don't feel like any talking."

Dr. Lockhart wondered, "Surely the verdict is not rendered so early." When he reached the next sled, the horses were resting.

"What you think, Doctor," an old woman called, "they aint' going to hang Stevens nor nobody, for killing John Brunner."

"Why, how is that? Is the jury in?"

Joe Brunner answered, "Yes, Doctor, yes, they went out and came back in forty minutes."

Here a sled load of Hufners drove up and stopped. Mrs. Hufner's face was angry and tear-stained; she exclaimed, "Ha! Doctor, we have raised fifty thousand dollars to pay them for hanging Stevens, and now that Lawyer Hains, he told the jury that nobody can hang him when they didn't see him put poison in the water my brother drank."

Then another voice chimed in, "And he had two men from the drugstore, an' they weighed as much poison as Stevens gave to John, and then that lawyer got some buckwheat cakes and molasses from the restaurant, and, what you think, Doctor? He put that poison on the cakes an' he ate it all up! an' then he went on an' told the jury they would see how that wouldn't kill a man, anyhow."

"And did it make Hains sick?"

"No, he wasn't sick. I looked back at him as I came out of the courtroom, and he was standing by a table folding up some papers and putting them in a big envelope, and there was nothing wrong with him."

"It's an awful bad way, Doctor, that nobody is going to be hung, and John Brunner is dead! and he was the smartest of all the Brunners, an' he was educated so much. It's awful bad."

"The whole thing is very sad," answered the doctor.

"That's what it is, Doctor," replied Joe Brunner solemnly. "Well, we better be getting home. Our chores have been only half done these days we've been at the courthouse."

"I guess we'll do something to Stevens yet, anyhow," added Mrs. Hufner. "He had no business trying to make a man sick with poison—he said he did do that.'

"Yes, he surely did say that," the doctor replied as he drove on.

* * *

The Limited express whistled for the road crossing, half a mile ahead, then dashed across, stopped at the station a moment, and was on its way to New York.

When the doctor reached the foot of the hill, he met another sled—a pair of bobs, with a wagon bed having a high spring seat. The team was driven by young Hufner. His companions, boys and young men, were his cousins and neighbors, among them a man called 'Lune' Diebold, whose mind was not well balanced. Diebold stood with his back toward the driver, holding onto the high seat, while he harangued to the boys about burning jails and houses. As the doctor passed, "Lune" Diebold exclaimed, "It was our mistake, boys, we could have burned the jail last night, and had him sure, but now, where is he? Gone like the wind, on the fastest train that ever ran through this town," then lowering his voice, he added, "But we'll watch till he comes back."

"What a crazy fool!" muttered the doctor, and again he asked himself "What possessed Hains? Why did he do it?"

* * *

A ten days later, Dr. Lockhart, reading the evening paper, exclaimed, "Listen to this, mother:

"Miss Alice Hinckley, who during the past two years has been the guest of her uncle, Captain George Hinckley, and his wife, of Manchester, England, arrived with them two days ago in New York on the S. S. Olympic.

"They were met by Miss Hinckley's mother, Mrs. Sarah B. Stevens, and Attorney Charles A. Hains, to whom Miss Hinckley was married at noon, yesterday, at the home of Mrs. Stevens' sister, Mrs. Joseph Aldrich, of Thornton Heights, by Rev. William O. Scott, D.D., pastor of the Third Presbyterian Church.

"Mr. and Mrs. Hains will be at home after April 10th, in the Brooks mansion, which was purchased last week by Mr. Hains.

"Mrs. Stevens will reside with them."

Military Preparedness

By A. L. BENEDICT, Buffalo, New York.

EDITORIAL COMMENT.—The discussion presented in the following pages was submitted by Doctor Benedict soon after the closing chapters of Blech's "Memoirs of the World War" had been published. It could not be printed until now, for various reasons; one of them being, that we desired to give ample opportunity to Doctor Blech to prepare a rejoinder for simultaneous publication. We believe the subject to be of vital importance; sufficiently so to merit a place among the leading articles of the Journal.

Editor, THE AMERICAN JOURNAL OF CLINICAL MEDICINE:

COL. G. M. Blech has shown so broad a mind in his interesting "Memoirs of the World War" that I feel sure he will pardon some discussion of his last article (March issue, p. 184), regardless of the writer's inferior rank; especially as the war is over and even reserve officers are rather encouraged to make suggestions.

1.—Regarding the slight excess of total French over total German troops, at the beginning of the war, we might go further than Col. Blech and hold that, granted there is time for training, military strength depends on the total militia which, for various reasons well understood by military authorities, is pretty close to 10 percent of the total population. In the case of countries in which practically universal military training had prevailed for more than a generation, this is even more true than in the case of countries like our own which has never had efficient universal military training.

2.—One advantage, which Germany had over France at the beginning, was in line with the generally accepted military principle that, other things being equal, an offensive policy is superior to a defensive. A carefully conceived aggression is almost always successful at the start.

The National Guard

3.—It should be understood that the National Guard rests largely on economic considerations. It costs less to pay for one evening a week than for seven days, not to mention the even more important conservation of labor for industries of various kinds. The addition of a reserve of more or less trained but inactive officers and enlisted men is a further factor of safety. It should be understood, however, that the policy of universal military training, the encouragement of civilian training camps, etc., diverts strength from the voluntary maintenance of the National Guard on its present basis, while the provisions for using the National Guard simply as raw material for the Army, in case of war, and the precedent of its disruption during the past war tends to weaken its prestige. As a Guard officer (though only since my discharge from the federal service during the past war), I should like to express the opinion that the National Guard should either be the sole recognized active military body after the Regular Army and that it should be assured of preservation as an entity composed of subordinate entities, or else that it should be abandoned in favor of some such temporary compulsory military service as has characterized the armies of continental Europe.

In estimating the potential value of the National Guard, it should be borne in mind that, while we are quite apt to speak of ourselves as evening soldiers, and recognize our inferiority to the Regular Army, the actual time spent by the Guardsman on duty is considerably more than an evening a week and the work is more intense than in the Regular Army in time of peace, especially for commissioned and the higher-grade non-commissioned officers. Approximately, the Guardsman works about one-quarter of the amount of the Regular and gets about one-eighth of his annual pay. This is not stated in any spirit of complaint. The relative independence of the Guardsman is more than worth the relative difference in pay. In fact, it is somewhat doubtful whether the pay of the National Guard has really proved an inducement to enlisting.

Another factor in estimating the comparative values of the Regular Army and the Guard is also likely to be overlooked: The Guard includes, especially in its non-commissioned officers, a good many Regular-Army veterans. On the other hand, the Regular Army necessarily consists to a large degree of new material and, like the Guard, is in a constant state of flux. Thus it often happens that a unit of the Guard may surpass a corresponding unit of the Regular Army in one or more details, such as holding a straight line at a review, synchronism in drill, marks-

manship, and other matters.

It should be remembered that, with certain exceptions mainly pertaining to administration, finance and other details of paper work required by legal or economic factors, the Guard does the same things as the Regular Army and in the same way, only it does not do them quite so often, nor on quite so large a scale and, consequently, it lacks many points of perfection. But, whether the imperfection of the Guard would amount to anything, practically, from the standpoint of national defense, or whether it would take more than a few weeks of additional intensive training to remove the rough spots, is questionable.

As to Discipline

The main point of difference is in discipline. To put the matter personally and concretely, my men are not afraid of me and I am not afraid of my colonel. We are a little lax about some details of military courtesy, mainly because of being rushed for time. Officers say "Sir" less frequently than in the Regular Army, and enlisted men (unless Regular Army veterans) use the second person in addressing officers. That third personal way of talking never lasted through more than a sentence or two in the federal service and it always reminded me of the distant past when grown persons inquired if "The little boy wanted to have his nose blown." As for loyalty and industry and that sort of thing, not to mention interest in the work itself, the Guard averages well.

Just how much value intensive discipline has, is an open question. The National Guard is more strictly comparable in this respect to the French Army with its fraternalism, to the Volunteers of the Northern States, and practically to the entire army of the Confederate States during the Civil War, to the American Revolutionists at least till Baron Steuben trained them, to the Boers, to the colonial American troops which fought so well and with such abominable lack of discipline almost side by side with trained British Regulars in the late seventeenth and early eighteenth century. All reports seem to show that our own discipline was relaxed as soon as troops debarked in Europe, and the wonderful discipline of the Germans had its drawbacks. For instance, long before the war, the Kaiser asked the criticism of a visiting officer in regard to the war manoeuvres. The criticism was to the effect that the attack was in masses that would result in heavy losses from counter fire. The Kaiser replied that that was the only way in which his men would attack. The prophecy of relatively heavy loss was fulfilled in several engagements during the war—unless, the reports were propaganda. One of my friends, a private, had both arms disabled in the Fall of 1918, but brought in three German prisoners. Of course, I am not discussing discipline from the military standpoint in a technical sense but merely from the utilitarian one of national defense. The soldier whose spirit is broken, who has no initiative, who has lost his sense of comradeship, is in one sense a highly desirable product of discipline, but it is questionable whether he will fight well.

Paper Work and Red Tape

4.—It seems to me that a much greater degree of optimism is permissible with regard to the leavening value of trained soldiers among raw recruits, than Col. Blech holds. For example, the medical detachment of a regiment consists of 30 enlisted men and 5 officers. Given one man familiar with army routine, to take care of property and paper work, the drills, instruction, care of equipment, service to other troops, development of esprit and recruiting can all be carried on satisfactorily. Without such a man, ten minutes' type-writing drags through a whole evening, the attention of officers is diverted from executive to direct clerical tasks for which the average medical man, in or out of military duty, is absolutely unfitted, the whole routine is upset and everyone becomes discontented. This is no fancy sketch but a before-and-after picture.

The elimination or even decided simplification of what is called red tape seems to me hopeless. The men who suffer from it have not the authority to remedy it until they have attained so long experience in it that they are not only personally freed from its worst features but have come to regard it as natural. Even the men who realize its iniquities, not as a matter of personal harassment but of interference with actual accomplishments, are as a rule lacking in the ability to suggest practical reforms. To call in experts from civilian life, would result in a still worse maze of filing cabinets, cross indexes and reports. It should be recognized that red tape is not essentially a military vice. The only difference between military and civilian red tape is that, in the Army, practically everyone suffers from any defect while, in civil life, any one not directly under the alternative duress of complying with rules or losing his job can dodge red tape. Four million men had the object lesson during the war; yet, many of those same men have come back into civil life and have subjected themselves to, or have voluntarily initiated,

complicated systems of book-keeping and "efficiency" methods worse than those conceived by the worst military martinet. The only hope, so far as military red tape is concerned, is, that it will be thrown overboard in a real fighting emergency, just about as it has been in the past; that a real genius will rapidly rise to a rank sufficient to enable him to institute reforms or that some ex-soldier, entering the political arena, will mercifully force the matter on the Army.

Training of Men

Under the assumption of a plan of skeleton Regular-Army units, to be increased five-fold in a military emergency, it seems to me that much could be accomplished, although it should be understood that I do not advocate that plan as the ideal or the sole method of providing defense, any more than does Col. Blech. By proper distribution of experienced men and by relaxation of discipline to permit immediate correction of errors, the close-order drill could be taught, in less than a week, sufficiently to handle troops. The slow progress at some training camps was largely due to the fact that men would stumble about all day because the men next to them were not allowed to whisper a word of explanation or touch them. Of course, this time would not produce snappy soldiers or neat alignment. The open-order drill is simply a matter of common sense and adaptation to circumstances; the only difficulty being, to simulate perfectly natural actions on a drill ground or smooth floor and to put the matter through in military style without getting back to the close-order drill. Men of average intelligence, even discounting the fact that a large proportion of civilians are fairly expert with fire arms, can learn in a very short time, especially with a veteran within reach to assist in difficulties, not to ruin a rifle, not to kill themselves nor their comrades, and to shoot in the general direction of the enemy. Some military men, including the Germans before the war, held that marksmanship was of very little actual value in warfare. All but the very wildest shots on a range would be dangerous to an enemy. A miss, in many instances would hit the next man and, if we consider the heart as the bull's eye, a low score by wounding takes more men out of action than an instantaneous killing. The marksmanship scores, made by fairly efficient units of National Guard or Regular troops, correspond theoretically in this: that two shots would kill or wound every man in an opposing force of equal size. It was said that, during the Civil War, it took a man's weight in lead to kill him. Certainly, there have never been reports of conflicts in which anything approaching the theoretic efficiency of expert marksmanship has been attained, but it may be that there are statistics showing the contrast between, say, (1) marksmen on both sides, (2) marksmen on one side, raw shots on the other, (3) raw shots on both sides; fairly even numbers being matched in each case. Of course, the value of expert marksmanship for certain services is undeniable, but the fact remains that, for an emergency, the rudiments of rifle practice would be of considerable value. So far as hygiene of the feet, practical sanitation on the march and in camp or trenches, practical instruction in various details, even maintenance of morale and courage, are concerned, even less than 20 percent of veterans distributed among raw recruits would be of incalculable value.

A good many military essentials can be dispensed with when we consider the army not as a profession, or even an assemblage of artisans, but as a protection against invasion. For example, raw officers can be spared quite a little time and trouble with regard to the saber, which is absolutely useless in modern warfare, although it was reported that a stone-age axe, found in digging a trench, became a useful weapon in the late war.

There are 40 pages of litter drill with 4 bearers in the requirements of medical troops. With proper allowance of time for other matters, it takes a year to learn this in the National Guard. In time of war, it is inconceivable that more than two bearers could be spared for ordinary litter work, and it is only a hypothetic patient that would want to be handled by the commands: "Right side posts, prepare to lift, lift, lower patient." One hour would suffice for all the instruction, included in the 40 pages, that would be of practical value. (It should be understood by those not familiar with the subject that the litter drill only touches on the actual care of patients and is distinct from "first aid.")

5.—It should be conceded by the critic of this article, that the viewpoint assumed is that of genuine emergency, with the country perhaps not so far from a state of military preparedness as in the latest instance but still very far from being in a satisfactory condition, and not having the luck to have an enemy weak on land and largely subject to naval attack, as in 1898, nor held at bay on another continent, as in 1917-18. The writer has always been a firm believer in discipline—

though mainly in an altruistic sense—and is very humble toward his superiors in military service, though not properly hard-boiled toward those of lower rank. He believes thoroughly in the importance of the subjects that might be omitted in a life-and-death struggle and, while it would be hypocritical to pretend a love of paper work, it would be foolish to contend that the army can be conducted without systematic book-keeping. However, this system should be either so simple that any one of fair intelligence could do the necessary paper work in a very brief time, or the whole matter should be left to a special department (for example an enlarged quartermaster department) requiring only needed information from the line and other departments and free to complicate matters to the heart's desire of its highest authority.

A. L. Benedict, late Capt. M. R. C.
Major M. C., N. Y. N. G.

Buffalo, N. Y.

—

Reply to Major Benedict's Article

Editor, The American Journal of Clinical Medicine:

PERMIT me first of all to express my sincere appreciation, not only for the opportunity afforded me to see Major Benedict's timely article and to make reply to it, simultaneous with its publication, but also for the patriotic act in giving up so much valuable space to a problem of national importance, at a time when the majority of our citizens pretend to be tired of anything having in the remotest way any relation with war.

It is easy to discuss national defense when the nation is in martial mood and quite another matter when we all have become satiated with military preparedness. Only those who can see a few years ahead realize that the greatest danger to national security lies in the lethargic reaction following an exhausting campaign.

In looking over Major Benedict's article for the third time and in comparing his arguments with the ideas I have promulgated in the last chapter of my book (for, a book it will be) on war reminiscences, I fail to see wherein we are seriously in disagreement. It seems to me rather that we are very much in accord on vital questions, though it is clear to me now that I could have been a little more explicit in stating some of my ideas. Instead of taking exception with any one desiring to discuss anything I have contributed and hope to contribute to your columns, I am sincerely pleased that a man of Major Benedict's caliber has seen fit to honor me with a lengthy discussion, and I trust that he will accept the following reply in a spirit of good camaraderie.

I shall not touch on the ante-bellum military situations in European countries, because these are of no great interest to us. While a good military student should be familiar with the methods of raising, equipping and training civilized armies all over the earth, the lessons cannot be applied to our country unequivocally. It is with military preparedness a good deal like with strategy. A professor of strategy, who would repeat a lecture delivered before a class of French cadets, acknowledged by all French generals to be a masterpiece, to a similar class of Belgian or Swiss subjects, would be decried by the critical students of military affairs, in those countries, as one promulgating misleading doctrines. And rightly so, because, what is sound doctrine in France, is impractical and dangerous in Belgium or Switzerland. Why? Because the geographic location, the political role and the military problems of the diverse nations dictate preparedness for potential military activities which are distinctly at variance with each other.

To make it plain, France is a large nation exposed to danger from naval attack almost on all sides, with one border several hundred miles in length facing a potential military giant acknowledged to represent the acme of efficiency, with colonial possessions in Africa and Asia requiring the maintenance of large units of colonial troops, while Belgium is only a buffer nation and Switzerland a peace garrison securely entrenched in a moral and physical mountain fort, virtually impregnable even to modern armament.

The same simile applies to the United States. We may have trouble with Mexico, an oversea nation may declare war on us, or we may have to declare war on some distantly located country. In either case, the immediate danger is not a matter of hours. To make it plainer yet: France, Germany, Austria, the Balkan States, etc., find themselves a good deal in the same boots with an industrial surgeon who may be called upon to perform an emergency operation which brooks not a moment's delay, while the United States can be called upon to do work somewhat like the surgeon who appoints an hour for a planned operation and, therefore, has time to look up his anatomy and refresh his memory on complicated technical points.

If these premises be correct (and, in the light of our past history, they cannot be suc-

cessfully disputed), I think that I was justified in proposing a regular, or professional, army large enough to maintain combatant, technical and administrative units for potential immediate needs but especially for the purpose of training our youths.

—

As regards the National Guard, I cannot be accused of prejudice, for I am an old National Guard officer myself and, indeed, my happiest days have been spent in the Guard. I have not attacked this institution, but I have endeavored to be just in my estimate of it as a military body. Major Benedict stresses on formalism. I am a firm believer in discipline, I demand that military courtesies be observed, and especially so in the Guard because, there, officers and men live in the same communities, may be close individual friends, and there is danger of the old adage, that familiarity breeds contempt, turning the Guard into a social affair rather than a military body. Under present conditions, that is, in the absence of compulsory military training, the Guard stands between military defense and nothing, and every friend of the nation must jealously guard its interests. I do not care whether an enlisted man used to say to me: "Doctor, may I go home tonight a little earlier. I'll surely be glad and thankful if you will let me go home," instead of: "Will the major please permit me to drop out now because so-and so"—because all these little formalities to the mind of a thinking man are remnants of bygone days. But I do care to avoid such a scene as to hear a corporal telling his platoon commander: "Jack, lay off on me, you have been giving me all the dirty work and I reckon its time you pick on somebody else," and, when the lieutenant expostulated, the corporal telling him to go to a hot place and turning his back on him. May be, some democratic painter can vision Jack dying in the corporal's arms while the latter is firing his automatic pistol furiously at his lieutenant's assailants, but I cannot vision it because I have seen these corporals and lieutenants in battle.

However, this can be remedied before a campaign by transfer or reorganization, and it may not be so serious as I fancy it is. What is serious, is the fact that, in spite of federal control and supervision, the name, National Guard, is a misnomer in that it represents a conglomeration of state troops, pure and simple. Well and good if a governor says to his political backers: "Hands off!" But, how many do it? Is it not a fact that, with every change of administration, the Guard is looked upon as a legitimate field for political exploitation, not only with the adjutant-general and administrative offices, which are in most states appointive offices, but even with regimental commanders?

The Greatest Danger

And, herein lies a real danger. Colonel A. commanding the xth Infantry is a wonderful officer. If it were not for certain circumstances, this man would have been a brigadier general in the regular army. He is a graduate of West Point who had to leave the Army, much to his regret, to take over important business matters in the interest of his family. He applied for appointment in the Guard of his state and, by his discipline, knowledge and devotion to duty, developed a splendid regiment which could boast of an esprit de corps seldom seen even in the permanent establishment. Colonel A. is known to be a staunch Republican, a thing not usually looked upon in our country as a particularly heinous crime.

A Democrat is elected governor of his state. Powerful political influences are tormenting the chief magistrate to retire Colonel A. and to appoint in his place some incompetent captain who did yeoman work for the party at the polls. And the thing is accomplished. What, do you think, becomes of the xth regiment? This is not a fantastic tale. I can give facts galore.

As I have said, I love the Guard, and I repeat, it has a right to exist and have certain autonomy. But, it requires complete federalization and entire independence of state control. Let the states organize state constabularies and allow the National Guard to develop itself as a semiprofessional army. If this cannot be accomplished in the next ten years, then some president with backbone will abolish the Guard as a national military asset and authorize the organization of reserve units. That this is feasible and legal, no one can doubt. Let us not forget that, while we have heard a good deal about the illegality of the draft, there is a law on our statute books which makes every adult male citizen of the United States a member of the militia. I do not pretend to be a lawyer, but I have a feeling that I am not amiss when I maintain that the same nation, which can order you to abandon your business and sit on a jury, has also the right and power to make you give up some of your time to serve in the interest of its security.

There is more to be said about discipline

[*Concluded on page 500.*]

Surgical Seminar

Conducted by GUSTAVUS M. BLECH.

Acute Pancreatitis and Perforated Peptic Ulcer

IT will be recalled that, instead of a surgical problem, as has been our custom for some time past, we submitted, in the May issue of the Journal, a surgical exercise, partly because it was believed that a variation in the surgical bill of fare would aid the mental digestion, partly because the opportunity for the Editor to learn something of the way in which our readers analyze surgical situations appeared to be a real one.

Selecting a situation which, symptomatically at least, had much in common, we invited a free discussion on the differentiation between peptic ulcer which had perforated and acute pancreatitis. To be exact, we asked our contributors to state briefly their experience and the differential diagnosis.

The exercise resulted in several communications, but most of these cannot be given, because they admittedly were not based on personal observation and bore the earmarks of quotations from the literature.

Three contributors distinctly stated that their observations were based on clinical experience, but that their diagnoses were neither proved nor disproved by surgical operation.

Dr. L. N. . . . . Iowa, writes:

Your departure from the presentation of abstract surgical problems appeals to me, because now I have an opportunity to present my own observation and do not have to fear that I am on the wrong track. On more than one occasion, when confronted with what is commonly called "acute belly", have I wished that I had some definite guides by which I could arrive at an exact diagnosis, since I am proud enough to feel that a mere exploratory laparotomy is a confession of diagnostic bankruptcy.

But, all this serves no purpose when you are called in to see a patient who appears to be desperately ill with an acute abdominal disease of some kind and, even without a rich clinical experience, a glance at him suffices to caution you that, unless heroic treatment is instituted, you are going to lose the patient, may be, in twenty-four hours.

I recall one case right here in my home town, a few months before the war, which, I hope, is interesting enough to merit publication.

Mr. D. A. B. aged 43, married, a bookkeeper, rather obese and known to be a moderate drinker of alcoholic stimulants. Has consulted me several times, during 1916, for gastric distress which I had diagnosed as a chronic gastritis, in all probability due to drinking. I cautioned him about the ill effects of alcohol and gave him nux vomica, capsicum and bicarbonate of soda in variable combinations, all of which seemed to help him very quickly, since I saw him every day on the street and his admiration for my "wonderful pharmacologic skill" (?) appeared to be bona fide on his part. At any rate, he appeared in the best of health.

In January of the following year, his wife called me rather excitedly, asking me to come at once, for, this time, her husband appeared to her desperately ill and, indeed, had screamed from pain something he had never done before. I took with me my emergency bag and went to his house, only a block away from my home.

When I saw him, he looked as if he were in collapse, his pulse being thready and about 140 per minute. He complained of intense pains all over the abdomen but especially so in the pit of the stomach. He had vomited several times, was vomiting in fact as I entered the door to his room and, during the examination, had several eructations. Palpation of the abdomen seemed to me to reveal a certain degree of rigidity of the rectus muscles.

After I had concluded the examination, my diagnosis was—perforated ulcer of the stomach and beginning general peritonitis.

I gave morphine as a tentative measure—if I remember correctly ¼ grain and 1/120 grain of atropine—hypodermically and urged

an immediate operation.

Consultation was obtained within an hour with a neighboring physician who had done much surgery of the emergency type and in whose judgment I had much confidence. He positively agreed with my diagnosis and, while we discussed gall-stone, both of us rejected it for two reasons; first, because the attack appeared too severe for even a violent attack of gall-stone colic, and, second, because of a previous history of stomach trouble.

In about another hour, we were ready for operation under general anesthesia. As soon as the peritoneal cavity was opened and the stomach delivered, we began to search for the ulcer. But the palpating fingers betrayed nowhere any evidence of an ulcer, either in the stomach or the duodenum. The gall bladder, too, appeared normal; nor could anything abnormal be felt in the biliary ducts. Inasmuch as the intestines seemed more distended than is usual in laparotomies, Dr. M. made a hurried search for an intestinal obstruction; but this, too, lead to nothing. Finally, Dr. M. palpated the pancreas and at once said that that organ felt thickened and hard. By this time, the patient's pulse became running and irregular and, after filling the abdominal cavity with normal saline solution, we closed the wound in two layers, put the patient to bed and stimulated him in the usual manner. Four hours after the operation, he died. We were permitted a partial necroscopy and this confirmed the diagnosis, the coroner (a physician) kindly having come to verify or deny our findings. He agreed in the diagnosis.

Now, I should be glad if you would tell us wherein we erred diagnostically and therapeutically.

Reply:—

I think, I can truthfully say that I am personally acquainted with many leading American and European surgeons and that I have read every book and monograph on abdominal surgery worth reading, and I still have to find the surgeon and author who can give us definite rules for an exact diagnosis of acute upper-abdominal disease.

Nay, I could go a step further and include the lower abdomen, for a displaced appendix may, under certain conditions, simulate pathology of the upper abdomen.

There are, frequently, conditions which baffle even the most expert diagnostician. From a purely practical point of view, this is not of vital importance; for, after all, the knife is the thing to resort to in all such conditions; with this proviso, however, that the surgeon should be prepared technically to cope with any situation that may reveal itself.

If it is recalled that Germany's foremost surgeon was suffering from acute pancreatitis, to which disease he succumbed without the eminent surgeons around him having even dreamed of this serious disease, I am not going to make even an attempt at criticism.

Still, the main thing is, to bear this disease in mind whenever confronting acute or, rather, intensely acute abdominal disease, and especially when the principal symptom—neuralgia-like pain—is located in the epigastrium.

If a critic should point out that you had something of a guide in the fact that your man was somewhat obese, you can reply with impunity that the textbook information is misleading; for, I have seen at least two cases of hemorrhagic pancreatitis in youthful and lean persons.

The fact, that your patient had gastric distress before the attack, also is of little clinical significance; for, it is a symptom that may or may not precede acute pancreatitis.

When this disease manifests itself with its classical symptoms, a mistake is not very likely to be made; because there is no other abdominal trouble with which it could then be confounded. However, in a practice of over thirty years, I have never seen a case with upper abdominal "tumor", intestinal obstruction and absence of evidence of peritonitis.

True, I have seen about four or five cases of subacute or mild pancreatitis, but, of course, we are not now interested in this condition.

In comparing acute pancreatitis with perforated peptic ulcer, one is at a loss which particular symptom or group of symptoms to put up against each other. Previous trouble, traceable to the stomach, in peptic ulcer, may and may not have existed before the attack. This, too, may be sudden, extremely intense, with and without immediate evidence of peritoneal involvement.

Several authors correctly state that, in peptic-ulcer perforation, the resulting *collapse* is not as pronounced as in acute pancreatitis. Collapse is something that can not be measured with precision. I have seen the worst cases of collapse in toxic conditions—it is all a matter of individual resistance. In other words, some individuals may have a mild trauma and show collapse while others may have a severe trauma and the collapse be mild in comparison.

While I have asked that only these two

conditions (acute pancreatitis and perforated peptic ulcer) be discussed, other possibilities should be borne in mind, in all acute abdominal disease. To do so today, though, would lead us too far. We hope to come back to this at a season when, as one of our friends writes me, the fishing tackle is not the most interesting problem to be unraveled.

There is one more thing to be discussed as regards the diagnosis. A contributor points out that the term "acute pancreatitis," *per se*, is meaningless. I know that very well, but in reply, I say that we are lucky if we succeed in correctly recognizing existing disease of the pancreas. No mortal man can establish, before operation, the exact form of pancreatitis that we are confronting. Indeed, that is of little practical interest at that moment. Only when the pancreas has been brought to view, does the particular form come in for consideration.

In the case under criticism, the mere palpation of the pancreas and the establishment that that organ is thickened is not very enlightening; for, it is just as likely that you two gentlemen palpated a carcinomatous pancreas. Carcinoma of the pancreas is relatively frequent. I have seen one case at least in which one of our leading surgeons thought of tumor of the spine and had a number of x-rays taken, which, to the disgust of the family, were interpreted in all sorts of ways. To my poor untrained eye, the radiographs did not betray any pathology at all.

Of course, with the patient sinking fast, closure of the abdominal wound and stimulation was the only thing to do. What drugs you used, you do not state; but, here is a case where large doses of strychnine injected hypodermically might have done some good. As a rule, I have little faith in strychnine, and, in this case, I do not mean to imply that it should have been given for the collapse, but, rather, to affect the primary condition.

For this, I have no scientific explanations, still, I know of one case, the wife of a surgeon, who suffered from acute pancreatitis (the symptoms were classic in this case), whose life was saved through injections of heroic doses of strychnine, the patient having declined operation.

Now, as to the operation itself. The pancreas must be exposed either through the mesocolon (transverse) or, if the viscus bulges, through the gastrohepatic omentum or the gastrocolic omentum, through a transverse incision in a bloodless or, rather, blood-vessel free portion of either omentum. Wherever the incision is made, the transverse direction is best. The steps to be taken now depend entirely on whether the pancreatitis is hemorrhagic, interstitial or necrotic. Drainage and tamponade, incision or even excision of the tail of the pancreas are the steps dictated by the particular pathology encountered.

In compliance with the wishes of a number of our readers, we hereby announce a new feature, namely, a discussion of

Surgical Therapeutic Errors

The following communication is, so far, the only one available.

Dear Colonel:—

You will, no doubt, be surprised to hear from me. I am really afraid that you will not recall me. So, I will remind you that I served under you at Base Hospital 208 and that you frequently came to the genitourinary department and demonstrated to me a number of new operations, of which I knew nothing, although I was supposed to be a pretty good G-U specialist.

Recently, some of our boys passed through here and told me about your work, as a department editor of THE AMERICAN JOURNAL OF CLINICAL MEDICINE.

I know you too well to dare say how much I appreciate your efforts; but, really, they are of immense value to us younger surgeons. As I am writing you in the capacity of a reader, I beg to say that I feel free to apply to you for aid.

It occurs to me that this is really what the Seminar is for: To help us young fellows who have neither sufficient experience nor the means to overcome unusual difficulties. And, if you will pardon me, allow me to suggest that you inaugurate, in the Seminar, a department of help, not only in the matter of diagnosis, but in all other activities of our craft—therapy, surgical technic, for example.

If you so desire, I shall deem it a favor if you will tell me, either through the pages of the Journal—the Surgical Seminar—or, if you prefer, through a private communication, what was wrong with my technic, if an error there was, in the following case.

A young man of about thirty years old has suffered for some time from symptomless hemorrhages from the bladder, for which he received all sorts of irrigations and prescriptions by several physicians, but without relief.

When he came to me, he was quite worried. Cystoscopy confirmed my suspicion that his was a case of papilloma of the bladder. As

the kidneys appeared to be normal and there was no other contraindication, I suggested an operation which was immediately accepted.

The operation was performed in the usual manner. After opening the bladder-wall extraperitoneally, I brought several tumors to view. As they had broad bases, I excised the area containing the tumors and sutured the wound surfaces longitudinally; that is, in the axis of the body.

I closed the bladder-wound almost completely, except to permit the passage of a soft-rubber drain. For three days following the operation, I had troublesome hemorrhage from the interior of the bladder.

What I want to know is the source of the hemorrhage and the reason for it.

"CADUCEUS."

Maryland.

—

I have replied to my old war comrade by a personal letter, which will be published in the September issue. Meanwhile, the readers are urged to send in their own views on the problem.

[*Concluded from page 496.*]

than either Major Benedict or I have said, but it is now generally understood that the drill is only a means to the end. The whole litter drill, to cite an example, is smashed to smithereens under stress of battle. Still, it helped to keep the men under fire without yielding to the instinct of self-preservation. Display and music and flags and ceremonials and parade marches and ribbons and goose-stepping and what not are too insignificant externals to require philosophic analysis. War is a serious business. War requires leadership and trained, thinking following. This cannot be attained in camps, parades, armories or lecture halls. All these are but the preparatory elementals. The main thing is practice and, as wars cannot be produced at will, the men must be taught under conditions simulating war. The Fall, when the harvest is in, should see divisions and divisions, organized as army corps and armies, face each other in mimic battle. During the cold winter, the commanders can explain what happened. Officers and men will appreciate what they have been through as human beings, not merely as cannon fodder. The generals will talk over the grand strategy, the colonels their regimental missions, the captains, lieutenants and sergeants their little roles and the enlisted men, who did the actual reconnoitering and fighting, will be able to take the leadership that may fall to their lot. We of the medical service have similar problems within the frame of the combatant strategy and tactics, and we must solve them in a similar manner.

What our nation now needs is a general recognition that all peace hopes and promises are, to use a vulgarism, political bunk.

We must be conscious of our dignity as American citizens, rise as a body and silence the reds and the insane, upholding the hands of our government and not barking at it because we did not get all the military titles and decorations that the other fellow got. I, too, had to wait a long time until I attained the right to wear the silver spread eagles on my shoulder knots, and, while a foreign government has seen fit to honor me in a military sense, my own government has not thought my work sufficiently distinguished to merit bestowal of a decoration, although I have been recommended for it. I am fifty-three years old and the chances of my seeing active duty again are slim. Yet, if another call came, I should go again, even if I knew that I would never return home. However, I am not waiting for the call. I am a reserve officer now and I am ready to give up every minute needed and every dollar I do not need for my existence to further the cause of national defense.

My story has been written partly as a personal narrative, partly to bring home some lessons. If it arouses some members of our profession to think and to sign up again with the Army or Navy, my hours spent under the light of the midnight oil will be more than repaid. With old Europe in the throes of anarchy and hatred, life in the United States is paradisical in comparison. Surely, it is worth while to give up something to make certain that our flag will float over our ramparts forever and ever! So mote it be.

GUSTAVUS M. BLECH.

The General Practitioner

Talks About Professional and Personal Problems
Conducted by WM. RITTENHOUSE.

The Boy and the Farm

ONE of the most serious problems of our day is the tendency of the farm dweller to gravitate to the city. This tendency is not only a large factor in the high cost of living, but it has also an important bearing socially on the happiness of thousands and on their success in life. It makes it more difficult and expensive for the farmer to secure the labor necessary to cultivate his farm, thus making everything that he produces more costly; and many a youth who, under proper conditions and with suitable education, might have become a modern, up-to-date, and successful farmer, goes to the city and spends his life in a more or less successful struggle to rise above mediocrity.

Glamour of City Life

There is a glamour about the life of a great city that appeals with a strong fascination to the imagination of the boy brought up on a farm; a glamour that, too often, is found to be delusive and unsatisfying, when too late. Many a young man leaves the farm and spends the rest of his life in a hard struggle to keep his head above water in the great whirlpool of city life. If he is simply an average individual, he finds himself in competition with a vast multitude of other average individuals, and his life becomes a series of deprivations and self-denials, all because he wanted a "white-collar job."

Of course, if he has real ability, he may be one of those few who become distinguished for success in one line or another. It is a well-known fact that very many of our successful business men were country boys. There is something in the discipline of farm life and work that develops character and makes for success in any walk of life. However, if the boy who was brought up to hard work can succeed in city life, there is no reason why he should not succeed also as a farmer. Thousands of them are doing it, and are getting more out of life than if they had taken up a career in the city. There is today as much opportunity, in farming, to make use of a scientific education and modern efficiency methods, as in manufacturing or commerce. Many farmers are sending their sons and daughters to agricultural colleges and even to literary colleges, and those same young people are working a revolution in farm methods and farm life.

The Farm as It May Be

It has often seemed to me that, if I could paint life on the farm as it is, or rather as it is in many cases and might be in all, I might do my bit in stemming the tide that is constantly flowing cityward, and that means success for a few but a life of deprivation and hardship for the many. To be poor in a great city, is not conducive to happiness.

It has been repeated so often as to be trite, that the farmer is the foundation of our social structure, and that the rest of the world are consumers, while he alone is the producer. And yet, trite as this fact has become, we do not sufficiently sense it or appreciate it to the extent of acting upon it.

With the telephone, the automobile, the abundance of books, magazines, and newspapers, farm life is no longer the lonely and dull existence that it was a generation ago. In fact, I believe from my observation during my yearly vacations that the young people on the farms are today getting more out of life, I mean more that is worth having, than their cousins in the city.

Then and Now

My own boyhood was spent on the farm long before all these modern improvements had come to brighten country life and, during my teens, I was fascinated, like so many others, by that glamour of city life seen at a distance. Many a time I leaned on my hoe or rake in the field and watched the railroad trains go by, with the thought that I could be happy if I were only on board on my way to a great city, where not only fortune but a continual round of pleasures awaited those who

were fortunate enough to throw off the shackles of farm slavery, as I then considered it. That was at first. But later, when an older brother did go to the city, things began to look a little different. The letters he wrote home, describing his struggles to get a foothold and also telling of the many unpleasant features of city life—the smoke, the dust, the heat, the dullness of life in little bedrooms that were the only places that thousands called home—rooms so small that even the dogs learned to wag their tails up and down instead of from side to side—the restaurant- and boarding-house food so different from mother's bountiful table—all these things set me to thinking, and I began to let my mind dwell upon the other side of the picture.

Another Side

Most boys are not fools, and they can see the truth if it is properly presented to them. I began to see in what respects country life was more satisfying than I had supposed, and to realize how well off I was. By the time I was seventeen, I had got over the fever that had filled my mind with hallucinations about city life, and I was content to map out a career along other lines. When I did finally go to the city, at twenty-five, it was rather unwillingly and without illusions; it was only because the exigencies of a professional life made it necessary.

If there are those who wonder what there can be attractive in the life of a boy born on a farm and growing up to take his share in its daily work, I beg to submit a few of my own experiences.

I was born in what is now the fruit belt of the Province of Ontario, but which was then devoted to mixed farming. My father had taken up a hundred-acre tract of forest, when he married, in 1827. In my boyhood, there was still twenty acres of this in forest which was being kept for fuel, lumber, and building timber. The other eighty acres were in a high state of cultivation. Instead of depending upon a single crop, such as wheat or corn, as is done in some parts of the West, each farmer raised a variety of crops, trying as far as possible to produce everything that he needed. This made possible the rotation of crops which brought the land into a condition of steadily increasing fertility, instead of impoverishing it, as the one-crop system does. It also spread the work more evenly over the whole year, in such a manner that a farmer with several sons (and they had large families then) could get along with very little hired help.

A Productive Farm

On my father's farm, we raised wheat, rye, oats, barley, corn, flax, and buckwheat; clover, timothy, and blue-grass for hay; potatoes, turnips, and pumpkins for cattle feed; sheep for wool and mutton; cows for butter, cheese and beef; horses for road and farm work; pigs for hams, bacon, and lard; besides chickens, ducks, and geese. We had fruit of every kind: apples, pears, peaches, plums, grapes, cherries, berries, and melons; also wild nuts in abundance, chestnuts, walnuts, butternuts, hickory nuts, beechnuts, and hazelnuts.

Pleasant Work

From this enumeration, it will be seen that there was work all the season through. There was no time when we were overwhelmed with it, but there was always something to do. Most of the work was pleasant, because it was not too hard, and because it was outdoors amid the beautiful fields and woods in the sweet, pure air. Occasionally, there were short tasks that were unpleasant. For example, thrashing was dusty and dirty work, especially the thrashing of barley and clover-seed. This work was the more dusty because it was done in large barns instead of in the open field from the stacks, where the wind blew the dust away. Working in barley, produces an itching of the skin quite as distressing as a bad case of eczema.

Plowing stony or stumpy ground or hard clay was also rather unpleasant; but all these things were only for a few days out of the whole year. The greater part of the work was rather agreeable to any boy who was not constitutionally lazy—"born tired."

Boy vs. Man

One thing I remember which every father of boys on a farm would do well to bear in mind. That was, that a boy from twelve to seventeen is often put into a group of men to work; pride makes him try to keep up his end, and perhaps he is even egged on by the jeers of men who should know better; while his strength is not equal to doing a man's work. So, he very naturally gets disgusted with farm work. My own dislike of the farm was greatest when I was twelve, but it grew less with each successive year as my strength increased. During my last year on the farm, at seventeen, I liked the work so well that I should probably not have given it up had it not been that the trustees of a village school insisted on my taking charge of their school. Once in the work of teaching, I liked it so well that I remained in it for fourteen years, until I went to medical college.

Social Life—Conversation

Why did I like farm work? First and chief was the variety. Social life may have been at times monotonous, but the work was ever varying. But, even social life had a side, then, which compares favorably with the customs of today. The art of conversation was cultivated to a degree that has been largely supplanted in our day by pleasures less wholesome if more exciting. We could profitably set on foot a movement to restore the lost art of conversation.

The long winter evenings and Sunday afternoons all the year round were utilized by both, old and young, for unceremonious visiting. It was the custom to include in these visits a meal, for which housekeepers were always prepared. On Sundays, after the sermon, it was quite proper and customary to go to a neighbor's house for dinner, even without a special invitation. In winter, when the sleighing was good, it would be hard to imagine anything more enjoyable than a merry sleighride to a friend's house, even at a considerable distance, arriving in time for supper, and a good visit during the long evening. At these visits, conversation was the principal amusement and, if we compare those occasions with the social functions of today, I think we must admit that conversation has become almost a lost art. I shall always look back with pleasure and gratitude to the instructive and entertaining conversations of my elders to which I listened when we had "visitors." At the present day, systematic intellectual conversation has been rather crowded off the boards by games, dancing, and the movies. I do not mean to say that these things, in moderation, are a waste of time; but, when they monopolize our recreation time, our rising generation is losing something valuable in neglecting the art of real conversation.

Winter School

As stated, our work was varied and seldom monotonous. It was lightest in winter. As soon as the regular farm work was over, in November or December, we went to school every day, in the old stone school house, where we absorbed education with a zest that city children seldom feel. This was because we were not sated; we knew that our studies were limited to a few months in winter, and we attacked them eagerly. And I am convinced that, in spite of the drawbacks under which we labored, the real education, mind training, and self-reliance which we acquired will compare favorably with the work of the graded schools of today, so far as practical results are concerned.

Mornings and evenings, we did the "chores," which consisted chiefly in feeding and caring for the live stock, and keeping the house supplied with firewood. At the end of winter, we got up an "exhibition" in the school house, consisting of "speaking pieces," dialogs, and music. The weeks of preparation for this even gave us more solid pleasure than anything resembling it in after life that I can remember. Then the school "examination" was held, when the parents and friends came to see us perform in class and on the blackboard, and try our best to be a credit to our teacher.

When April came and farm work began, the older pupils left the school, which remained open a month or two longer for the younger children.

Maple Sugar Making

Our first work was usually maple sugar making, and, if city boys and girls know of any work that is better fun and more like play, I should like to learn the name of it. Tapping the trees, collecting the sap, keeping the kettles boiling day and night, catching delicious naps on straw and blankets in the "sugar shanty" and finally "sugaring off"—all these things put new meaning into the words "joy" and "happiness." Then there was the sweet smell of the crisp, bracing air. The woods have a fragrance that varies with the time of year; but it is never sweeter nor more intoxicating than it is in these bright spring days in the "sugar bush."

As we tramped about gathering the sap, we had time to see whether the fish had begun to "run" in the streams, and to welcome the returning birds. When we heard the cheerful note of "pee wee," we knew that spring had really come and brought our little feathered friends from the Southland.

Appetizing Odors

And, what is that peculiar odor in the air, like smoke and yet different—sweeter and more fragrant, and somehow making one hungry? Ah! it is a whiff from the smoke house, where delicious hams and bacon are being given the finishing touch in real beechwood smoke—a smoke that gives the cured meat a flavor that nothing else can, not even hickory bark. The latter imparts a good flavor to hams, but not quite as fine as beechwood. Ham and bacon cured with salt and beechwood smoke (and no other preservatives) are so far superior to the stockyards product that many city people have no idea how delicious

these meats can be. Cured in this old-fashioned farm manner, they will keep all summer, forming a palatable and wholesome diet for farm workers, superior to fresh meats.

On the Quarter-deck of a Harrow

When the sugar boiling is over and the frost out of the ground, the fields are prepared for the sowing of spring grain,—barley, oats, and spring wheat. The boy may be too young to do much plowing, but harrowing requires but little skill or strength. So, many a boy has his ambition to drive a team gratified by being appointed commander-in-chief of a harrow, to which is attached a safe and sedate pair of old horses that have gotten over the days of their wild oats. The boy feels a distinct augmentation of his dignity; to drive a team, is a step towards manhood and has been an ambition with him for several years.

When the grain is sown, he helps clean out the ditches that are to provide drainage when heavy rains come. This ditching is not heavy work, and there is a fragrant smell about the warm spring earth.

The Barefoot Boy

Next, comes corn planting towards the end of May, and the pleasant work of getting the ground ready is made more so by the fact that now the boy can go barefoot. How light he feels when he first "takes 'em off!" Running seems like flying. Today, corn planting, like many other kinds of work, is done by machinery; but, a generation ago, a boy dropped the corn for each "hill" and a man with a hoe covered it up. Dropping corn for a neighbor was one of the few ways of earning a little pocket money for the boys of fifty years ago.

Crow—Friend or Foe

Corn planting over, we resorted to various devices to keep the crows from pulling up the sprouting grain, varying from the "scare-crow" of old clothes, stuffed with straw, to pieces of bright tin flashing in the sun, strings across the field to give the black marauders the suspicion of a trap. We used to regard the crow as a thief pure and simple. Today, we know that his destruction of insects and worms more than compensates for the toll he takes from the cornfield.

A variety of work presses now. The orchards need trimming, and, while this requires older heads and hands, the boy carries away the branches and piles them, and later, when they are dried, some evening he has a grand bonfire. While the trimming is going on, both sight and smell are being regaled by the myriad blossoms and even the ear is delighted with the steady hum of the busy bees.

Bee-Trees

Occasionally, these industrious little insects cause some excitement by swarming, and then comes the fun and interest of hiving them, so as to keep them from wandering away to some neighbor or to a hollow tree in the woods. When they do the latter, then the boy looks eagerly forward to October, when the adventure of cutting the "bee-tree" and confiscating the store of honey makes a bit of interest and excitement akin to that of successful hunting or fishing. I remember cutting one tree, on a frosty October morning, that yielded us a washtub full of honey, to say nothing of a few stings and swollen faces. Perhaps, at some future time, I shall describe in detail the finding and cutting of a "bee-tree."

Forest Tints

When working in the fields, in April or May, if the boy stops a minute for a breathing space, as he lifts his eyes, they rest upon the pink and white of the orchards in bloom or upon the delicate green of the forest just bursting into leaf. In autumn, the forests are grand in their crimson and gold of oaks and maples, mingled with the sombre green of pines and spruces. But I know of no more delicate tints in nature than the soft green of a forest in spring when buds are unfolding into leaves, especially a beech forest. The foliage is so thick as to produce a twilight among the leafy arcades and, seen from a distance, a beech forest about the first of June is a rest and a delight to the eye.

Wild Flowers

A tramp through the woods reveals innumerable varieties of wild flowers: trailing arbutus, adder's tongue, violets, trilliums, and many others. Who would not love to study botany under these circumstances?

This description covers but a small part of the farm boy's year. Some of his most interesting and enjoyable work comes later in the season, and I may touch upon it in a subsequent article.

[To be continued.]

2920 Warren Ave.

Good Medicine

Let us learn as we go, but not forget what we know

Conducted by GEORGE H. CANDLER.

Come On: The Fishing Is Fine!

HELP WANTED

Wanted: **A girl for the summer months,**
A girl who can really **play;**
Who can take the wheel of a Steed of Steel
And point her up Woodland way.

A girl who can hike, a girl who can fish,
A girl who can cast a dry fly;
Or, if she can't do it, will gamely stick to it
And win out, or want to know why.

A girl who can chum, a girl who can "bum,"
A girl who can sleep on the ground;
With a sense of direction, a rainproof complexion,
And a temper that's perfectly sound.

A girl who can whistle, a girl who can sing
And laugh when the tent springs a leak;
Who can swing a good paddle or ride a horse straddle,
And powder her nose once a week.

A girl who loves moonlight, and isn't afraid
Of small creatures which roam in the night;
Who can strike a match man-style and go swimmin' Pan-style—
That is, if there's no one in sight.

Wanted: A girl for the summer months,
One qualified, please will apply;
Then perhaps in cold weather, we'll **still** trail together,
And only "break camp" when we die!

(This "ad" will not appear again!)

MOST grave and reverend Seigneurs, what (if anything) do you know about **fish?** Excluding ichthyosis, 01. morrhuæ and the common, or domestic variety of sucker, are you on familiar terms with the piscine tribe? Do you know why fish *are?* Have you, by personal observation of the "recent subject," satisfied yourself that a vulgar pickerel is **not** a great northern pike and that a big-mouth bass, in June, will put up as good a fight as a pink-eye—provided that he has been taken in equally cold water? Do you realize that a Beneficent Providence made fish to be caught and that tired Professional Gentlemen were created, subsequently, for the express purpose of catching them? Therefore, to fail to do so is to fly directly in the face of aforesaid Providence. Hence, if you are not tired enough now to fulfill your destiny, get that way during the next few days and hie thee speedily to a fishery (Go to a good one!) and **fish** while the fishing is good.

Too soon, alas! will come full summer
And casting then is on the hummer!

And who, once he has cast for the belligerent bass in June, wants to snake him—or any fish—out of deep water at eventide in August with a ten-foot pole? Of course, even still-fishing is better than not to fish at all, just as a mule race is better than *no* excitement. But, if you would fish as the gods would have you, cast a thin line with a light lure or live bait and strike 'em while they're on top. When you're doing that with a five-ounce rod and a sweet-thumbing reel, you enter paradise and don't care a whoop whether insulin proves a specific for diabetes, or a low- or high-protein diet is indicated in acidosis. At such a time, the Naprapath, Chiropractor, Omnipath and Xtian Scientist (to say nothing of other animalculæ) enter not at all into your scheme of things—all you are thinking about is, when you are going to connect with a fellow who will go (on certified scales) just a few ounces better than that whopper your side-kick caught yesterday. Yep! When you go fishin', you're just a he-man in heaven—hob-nobbing with helgramites, hungry as a hell-bender and as radiant as Helios himself. (Any other "hells" connected with fishing will be distinctly of your own production. And, one must admit, a line does break occasionally or the "biggest one of the season" will throw the hook just as the net is slipped under him. Naturally that **is**—— well, it *does* justify a *mild* expression of disgust, and you feel so much better after relieving yourself right out loud—you can't do that even

in your professional life.) Oh, come on, let's go! I know exactly the right place and just how to get the big ones. Are you coming along or are you not? *Oui? Allons!*

It is dawn in the north Wisconsin woods—a mid-June dawn! We have, overnight, in some almost miraculous manner, left "the world, the flesh and the devil" behind and awaken to find ourselves in a new universe where even to breathe is beatific. Singing softly through the heavy, deep-green pines and hemlocks comes a balsam-perfumed breeze from the west, cool and with a tang to it like a dry champagne. In it one senses **life**, growing things, wide spaces and cleanliness. Inhaling it deeply, the brain clears, the eye brightens and the soul takes new hope. One lives again! The tent-flap is thrown open and the eye beholds a mystery—old as the world but ever new and indescribable—the birth of Day in Nature's scenic and scented sanctuary. In front of us, lapping rhythmically upon a shallow, shelving white sand beach, the grey-blue water of the lake begins to sparkle to amethyst as the golden fire arising in the east gains intensity. Already the tips of the silver birches upon the further shore are assuming a more vivid green, as the first slanting rays thrust through their tossing leaves, and each minute the white boles and delicate tracery of branches stand out more clearly. Along the margin of the lake, a blue heron flaps heavily and, just ahead of and below him, scurries a kingfisher, taking, with sudden dip, his toll from the small fish in the shallows. On a nearby tree, a great red-headed woodpecker seeking his breakfast drums industriously and, somewhere in the thicket, a song sparrow sings Matins. The hymn is taken up here, there, everywhere and, as the last narrow bands of floating clouds turn first red, then melt to fleecy wisps of vapor, the sun thrusts his rim well over the ridges and our *woods* day has begun.

Twenty feet from shore, a hungry bass leaps clear of the water to snap up a particularly enticing May-fly and, if one watches closely, he will see areas of disturbance about the old fallen and submerged treetops, where "minnies" and (I am sorry to say) even the bass fry are being harried by the valiant but cannibalistic black masters of the lake. If we are to catch Mr. Small-mouth in a striking mood, this day, we had better take our morning dip, cook our matutinal coffee and flapjacks and get into the canoes in jig time. As we run down and plunge into the cold water, we hear an axe ring and, even by the time we are hastening back to the tent, a thin column of smoke goes up into the sky and the never-to-be-forgotten fragrance of a young birch and pinewood fire enchants our nostrils. As we dress, we can hear the fire crackling merrily and the guides clinking tinware and pass. In ten minutes more, we are squatted (we have no tables here) along a convenient log, eating sizzling flapjacks and bacon and swallowing, scalding hot, such coffee as never was brewed elsewhere on this earth! *Absotively,* Doctor Gallagher, if you've never tasted coffee made with spring water over a birch fire in the North Woods, you don't even know what coffee is: *Posolutely,* Doctor Sheehan!—And, now, full as young goats, we make sacrifice to Lady Nicotine (any old briar will do, but don't smoke local "Sweet Tip Top" in it) and throw our tackle together. Here is what *I'm* fishing with—try it if you haven't found something better. I never could. A Heddon, five-foot, two-piece split bamboo rod, with cork handle and grip above reel seat, full agate guides and tip. A Talbot "meteor" reel, a light, hard-braided, bass-casting line and a twin Hildebrandt ("Slim Eli") spinner, mounted with a single Kendal sneck hook. Above the spinner, is the smallest swivelled sinker obtainable. Were I casting a live frog or "plug," this sinker would be omitted. But we happen to have a supply of good-size mud minnows (*Not* shiners), and one needs a little more weight than the spinner and bait together afford. My friend is a "plug fiend" and is casting a top-water lure—Basserino, the "boss-sereno" he affectionately terms the thing.

We slide out the canoes and start, he going north around the shore and I south. When twenty-five or thirty feet outside the old sunken logs and treetops, the guide steadies the canoe and I begin to cast, working first the near end of the cover and gradually casting inwards towards the shore. Every likely spot along a log should be worked and the extreme butt never overlooked. I have, not once but scores of times, seen one man fish a shore with poor results and another fisherman follow immediately behind him and make a killing. Be delicate, take time and don't try to make tournament casts; these are the rules which count here. Another essential is, to keep the tip of your rod *down* till you get a strike, then raise it and hook your fish *pronto*—or quicker. If you are fishing with a frog or for big-mouth (green) bass, be more deliberate. Indeed, under certain circumstances,

let him "run with the bait"—to turn it—before you strike.

Here, however, we have clear water and the small-mouth (pink-eye) to deal with, and he can be just a little quicker than you are—if you don't watch out. Anyhow, bing! there comes No. 1. He takes the minnow just as the first of the slender twin spoons spins clear of the water alongside a log end which just clears the surface. And, by the Apostle Peter, he *takes* it! One twist of the wrist hooks him fairly and the fight is on. This is no tender stripling but an old warrior who knows that safety lies *under* that log. Does he get there? He does **not** and, feeling the curb, he flings himself two feet into the air and tries to shake loose the irritating tether. Down he goes and off—this time lakewards but, within ten feet, he "breaks" again and, swifter than thought, doubles for shore. Now is the time your reel means more than its original cost a hundred times. It *must* run like velvet—you *must* get in line on the instant and you *must* feel that it will run out without any jamming or even an appreciable resistance. Do not let anyone induce you to use your "click" or "drag" when playing a bass—at least not till he is coming to net—rely on your *thumb* to control the line. My fish has headed down and probably is, for the instant, cogitating as to his next move. I tighten up on him—rod-tip well down—and again he is off but his run is shorter and, despite nursing, he will not break water again. Slowly he is reeled in and the guide gets ready to slip the landing net under him as I draw him to the stern-end of the canoe. At the critical moment, a sharp twitch of the line warns me that he is not ready to quit yet and, as the edge of the net sinks towards him, he is off again, this time making the longest run of his series. Again he is reeled up, and now he comes to top of water well over on his side and in a few seconds is in the net—and the boat. His neck is swiftly broken and the scales show him to be two ounces short of three pounds. Not a really **big** bass but a nice, clean-cut, beautiful fellow to whom you involuntarily pay homage as he lies still in death.

His eyes like red rubies still glimmer
'Gainst the emerald green of the grass.

Side-Kick, a few rods away, shouts congratulations and ads "Basserinos' turn next"! And it was so, for, just as I hooked No. 2, he brought his No. 1 into the boat. And it went mine one ounce better. **But**, it could not break water, for the triple hook on the "plug" had snagged him between the eye and the gills. That, of course, does not always happen; but, with a single hook, your fish has a better chance to play the game squarely and, if you fish for bass (or trout), you should *fish fair. They* fight that way!

By ten o'clock, the breeze died down, the sun was *hot* and the fish ceased feeding. But by that time, Basserino had seven and I had nine. So, we were content. We lunched on fresh bass filet, boiled rice, "dough-god" (hot from the pan), canned white Queen Anne cherries (kept cold in the spring) and more coffee (the amount of real coffee a man in the woods can consume is astonishing). Then we smoked one, two or three pipes (maybe more, I never count 'em) and, after a half-hour's snooze under a balsam tree, headed for another lake where the wall-eyes (pike perch) dwell.

Were it not for the fact that I want you *all* to go a-fishin'— really fishin'—I would **not** tell you how many pike we took before sunset that day. Moreover, you may not believe me when I solemnly swear that we threw back every fish which didn't look like two pounds.

As it was, we had so many that we were ashamed to look each other in the face. So, we looked at the fish. Then we thought of our poor, sweating, sophisticated city friends and dependants and sent one guide in to a point where he could box and ship them, properly iced. "And," he assured us on his return, "I sent all the law allows." His conscience is elastic.

We also had pike for supper—and more for breakfast. It may mean something to the initiated to add that most of these pike were "yellow bellies", taken around a weed bed at the mouth of a thorofare which led into another lake. Every one (including a five-pound "old settler" who was snaked out from around a "dead-head" in nine feet of water) was taken on the single hook, double Hildebrandt spinner (mud minnow bait) worked along about a foot above bottom. The guide paddles very slowly over the ground once you have "found bottom" and reeled up a trifle. If he makes any very appreciable headway or if a wind drives you at all, you must, of course, let out more line, or you will, when in motion, be fishing too high. For such fishing, a ¼-oz. sinker is desirable. Use swivels. Don't attach too large a hook— a Kendal sneck, No. 9 or 10, does the trick perfectly. At times, when the water is rough and along feed shores, wall-eyes can be taken by casting with

a top-water bait; but the real way to get them (if they are there at all) is as has been briefly described. It cost me lots of time and a considerable sum of money to discover even these simple facts, and I assure you they're worth knowing.

A light, short rod, light green or neutral colored line and single or double spinner with one ¼-oz. sinker and single hook baited with a live minnow for *pike*. Fish slowly along sand-banks or the shore early in the season and off weed-beds, bars or in deep holes as the water grows warmer. It has been my experience that there is little to be done with pike from about 11 a. m. till 4 p. m. On windy, dark, or rainy days, the rule does not apply quite so well.

Another point: Do not hook your minnow through the lip (or lips) alone. It is quite possible for even the best fisherman to so lose ten minnows before he lands one pike. Pass the hook through the mouth and out through the gill, then turn the point in and transfix the fish at about the middle of the body—not so far down that he is curled up on the shank of the hook but so that he hangs straight. The hook should penetrate the fleshy part of the minnow, from side to side—*not* his belly.

So hooked, you may be reasonably certain of hooking nine out of ten fish which strike. You will find, however, that, one day, pike strike viciously and, the next, will lie close to bottom and suck in the tail of the minnow, just holding on and refusing to gorge it. Then you must tease them by withdrawing the bait a few inches and then letting it go again. As soon as a real pull is felt, twitch the end of your rod up, and *that* fish is yours. Always keep a taut line and the tip of the rod within an inch or so of the water. If you carelessly trail with a long line and your bait half-way between the surface and the bottom, you'll get more pickerel than pike. And from pickerel, Good Lord deliver me! Unless, of course, he is a "real big one." Such a one gives you a short run for the money but gets even by making your tackle and boat stink and by being no particular good subsequently in the culinary department. However, some people like him very much.

All of this hasn't anything to do with musky fishing—or brook trout—and both of these aristocrats can be caught around in the territory where the bass and pike are. Take *what* you want *when* you like—if the conditions are not right for one, they will be for another. But, for the love of Michael Angelo—to say nothing of Angelina Aiken—go up to the place I've told you of and **Fish!**

If you can't get started just right, S. O. S. me and I'll give *you* a route map, only, don't put everyone else wise, or this happy casting ground, too, will be "fished out," *vitement*. If it so happens that you can take the old bus and run in, take it—you'll hit twenty-eleven trout streams *en route*. And, brother, off the beaten track (where you have to worm your way in between stumps) is where **the** bass lakes are. If *your* bus is a Ford or a Chevrolet, or even the *old* Maxwell, so much the better. Of course, the new, very swagger "good" Max. shouldn't be shoved through logging roads. At least, I don't recommend such extravagance, though, "pussonally," I *have* snaked a big seven-passenger where some Fords would fear to tread! And, then, again, a Lizzie has gone where *I* just couldn't make it. But **I** went in her—and we got the fish! Go thou and do likewise. Here's luck!

P. S.—Do It Now!

What do you care? This darned old earth
Was full of woe before your birth,
And yet good men have wed and died,
An' found it had a sunny side.
They was glad they came and glad they stayed,
Cheer up! Don't be afraid!

The Hamiltonian (Chicago).

Let's Talk it Over

Active-Principle Materia Medica

With Physiological Effects and Therapeutic Suggestions

By WM. T. THACKERAY, M. D., Fowlerton, Texas

[*Continued from June Issue, p.* 434]

Iodoform

(Triiodomethane.) Iodide of Formyl.

Physiological effects:—Chiefly an antiseptic and local anesthetic. In small doses, it lowers the functional activity of the nerve centers; voluntary movement is next affected, anesthesia is present to some extent; the reflex functions of the spinal cord are depressed; the excitability of the nerve trunks to external stimulation is lessened, and also muscular contractibility. Regarding the circulation, it slows and strengthens the ventricular contractions, slightly elevating the arterial pressure. Respiration and temperature rest about normal. In the gastrointestinal canal, it occasionally provokes nausea. Finally, the salivary, biliary and intestinal secretions are increased. In large doses, it is a toxic the effects of which are chiefly expended on the brain and nerve centers, whether used internally or topically.

Therapeutics:—It is useful in glycosuria; valvular diseases with hypertrophic incompetency; tuberculosis (pulmonary, meningeal, etc.). Also in bronchitis, pulmonary gangrene, foul breath, syphilis, rheumatism and glandular engorgements.

Dosage:—1/64 gr. to 1/6 gr. In tuberculosis (pulmonary), from 10 to 20 granules of 1/64 grain daily. In syphilis, 1/64 gr. six to ten times daily. While Iodoform has been looked upon as an ideal Iodine carrier for internal use, the Calx Iodata or ("Calcidin") will be found to answer a better purpose.

Irisoid

Oleoresin from the rhizome of the Iris Versicolor (Blue Flag).

Physiological effects: — Powerful hepatic stimulant, producing less intestinal irritation than Podophyllin, but greater purgation than Euonymoid. Also a decided stimulant to the intestinal muscles and glands.

Therapeutics: — Highly recommended in jaundice of malarial or catarrhal origin, torpid liver, cirrhosis of the liver, dropsy or intestinal disorders. In hepatic torpor evidenced by jaundiced condition of the skin and clay-colored stools, this drug should be used to its full effect.

Dosage:—1/12 gr. to 1/8 gr., three or four times daily, before meals and at bedtime.

Iron Arsenate

Salt resulting from chemical combination of Arsenous Acid with Iron Oxide.

Physiological action: — Restorative, even when there is irritability of the primæ viæ. Under its influence, appetite is improved, digestion and assimilation ameliorated, the red globules of the blood become more numerous and better oxidized; finally, nerve and muscular force are increased.

Therapeutics:—Useful in anemia, chlorosis, in convalescence after attacks of hemophilia, in leucorrhea and certain skin affections in lymphatic subjects.

Dosage:—1/64 gr. to 1/6 gr. for children, 1/64 gr. three times daily after meals; for adults, 1/6 gr. at the same periods.

Iron Phosphate

Salt in which Iron Oxide is chemically combined with Phosphoric Acid.

Physiological action:—Hematinic analogous to the other chalybeates, a useful reconstructive, particularly indicated where the conjoined use of phosphorus and iron is desired. Does not disturb the stomach.

Therapeutics:—Used particularly in amenorrhea when due to a weakened condition of the blood.

Dosage:—1/64 gr. to 1/6 grain. For children, 1/64 gr., three or four times daily; for adults, 1/6 gr. at same intervals.

Iron Valerate

A salt in which Iron Oxide is chemically combined with Hydrovaleric acid.

Physiological effects:—Antispasmodic and nervine.

Therapeutics:—Useful in hysteria and where an antispasmodic combined with tonic action is desired.

Dosage:—1/6 gr. every fifteen to thirty minutes for nervous or psychic derangements.

Jalapoid

Resin of Exogonium purga (Jalap).

Physiological action:—Powerful intestinal irritant, the action of which is chiefly exerted on the mucous membrane, so that, if the membrane is coated with a thick covering of mucus, the purgative action is comparatively mild and painless; whereas, in opposite conditions there is griping. In addition to this, there are other effects, probably on the nervous system, which are imperfectly known.

Therapeutics:—A valuable hydragog cathartic and diuretic. Indicated in habitual constipation from deficient glandular secretions; of service in some form of dropsy, cerebral hyperemia, etc., and where intestinal parasites are present.

Dosage:—1/6 gr. every one to three hours to effect in adults.

As the action of this drug varies in different individuals, there is no guide but, "dose enough." It will be found desirable to use the combination of Calomel, Podophyllin and Bilein with it, followed by a Saline.

Juglandoid

Resin from the inner bark of Juglans Cinerea (Butternut).

Physiological action:—Slight hepatic stimulant, vermifuge, depurative and antisyphilitic.

Therapeutics:—Useful in scrofulous affections and in a relaxed condition of the system.

Dosage:—1/64 gr., one to three before meals. Irisoid and Xanthoxyloid are useful adjuvants.

Koussein

Alkaloid from the female inflorescence of Brayera Anthelmintica (Kousso).

Physiological action:—Exercises a toxic influence on all forms of cestoda, or tape worm, hence regarded as a true tæniacide; but, having no cathartic properties, a subsequent aperient is required to promote the expulsion of the entozoa. It does not produce, usually, any physiological effects, but may be followed by some degree of gastric irritation. The association of Pelletierine with it renders the mixture a more certain tænifuge.

Dosage:—1/6 gr. two to four granules, fasting, with two granules of Pelletierine tannate, followed one hour after with a large dose of castor oil.

Leptandroid

Resinoid from the root of Leptandrin Virginica (Culver's root).

Physiological action: — Hepatic stimulant, promoting the flow of bile without irritating the bowels.

Therapeutics:—Useful in torpid liver and atonic dyspepsia.

Dosage:—1/6 gr. every two hours to effect in all diseases where it is necessary to stimulate the biliary secretion. The association of Podophyllin enhances its action.

Lithia Water Tablets

Carbonate of Lithia in soluble form.

Physiological action:—Neutralizes the acids of the stomach and renders the urine alkaline.

Therapeutics:—Useful in gouty and calcareous affections of the urinary organs. Also indicated in pyrosis, acid dyspepsia and in acute and chronic rheumatism.

Dosage:—5 gr., one or two dissolved in a glass of water, three times a day.

Lithium Benzoate

A salt prepared by a combination of Lithia with Benzoic Acid.

Physiological effects:—Powerful neutralizer of the gastric juice and alkalinizer of the urine.

Therapeutics:—Same as indicated in Lithia water tablets, but with antiseptic properties.

Dosage:—1 to 2 1/2 grains every four hours. In acidemic conditions, 1/2 to 1 grain with Colchicine 1/64 gr. every three or four hours with large draughts of water.

Lobeline Sulphate

A salt of an alkaloid, from Lobelia inflata (Indian Tobacco).

Physiological action:—In small doses, promotes the action of the sweat, salivary and mucous glands; slows the heart's action; lessens the movements of respiration, and relaxes spasm. In large doses, produces emesis, preceded and followed by intense prostration. Its action is analogous to that of tobacco.

Therapeutics:—Useful chiefly in acute and chronic affections of the respiratory organs of children, as an expectorant and antispasmodic. Recommended in croup, eclampsia, sunstroke and spasmodic conditions generally.

Dosage:—1/64 gr., one to three every half to two hours; cautiously, to effect full relaxation.

Lycopoid

Resinoid from Lycopus Virginicus (Bugle Weed).

Physiological action: — Expectorant and sedative, acting through the sympathetic nerves. Controls passive hemorrhage; therefore useful in hemoptysis. Of value in epilepsy due to irritation of nerve centers, and in various cardiac troubles marked by irregular heart action with dyspnea.

Dosage:—1/6 gr., one to four, three to six

times daily with Cactoid 1/64 gr. if indicated by irregular heart action.

Magnesium Peroxide

A mixture of Magnesium peroxide and Magnesium oxide (equivalent to 4.25 percent available oxygen).

Physiological effects:—Promptly efficacious in meteorism, flatulence and other disorders due to abnormal fermentation of the stomach contents.

Therapeutics:—Indicated in gastric catarrh and hemorrhage arising from gastric ulcer or cancer. Its antiseptic properties makes it of great service in typhoid, dysentery, diarrhea arising from hyperacidity, etc. In uric-acid diathesis, it gives excellent results; also in anemia and chlorosis.

Dosage:—5 grs. every three hours with a little water. In pyorrhea and other affections of the buccal cavity, 5 grs. may be dissolved slowly in the mouth.

Magnesium Sulphate

The salt resulting from the chemical action of sulphuric acid upon Magnesium oxide.

Nature has installed in all parts of our earth mineral springs, the majority of which depend upon Magnesium sulphate for their laxative and purgative properties and which latter forms one of the most useful of all remedial agents in the treatment of disease.

Physiological action:—Hydragog cathartic, acting on the large intestines by osmosis.

Therapeutics:—While there are some drugs that are harmful as habit forming, this cannot be applied to Magnesium sulphate whose daily use has been and is being taught in connection with active-principle medication.

Burggraeve, the master and teacher of this practice, not only taught its use, but practiced it in his own person, calling this practice *"le bain du ventre,"* or "bath of the bowels," and he said further: "Through the daily use of the intestinal bath by means of the dehydrated magnesium sulphate, I have been able to continue my work, more or less valuable to the world, as my critics see it, with undiminished cerebral activity until I have passed my ninetieth year."

The writer has had a like experience, dating from 1879 when he first adopted the "habit."

I look upon it that the greatest good that the Doctor can offer his patrons is, to teach them how to use Magnesium sulphate daily, and to see that they follow his teaching. It will keep them in better physical and mental condition and aid him in treating any abnormal trouble with which they may be attacked.

In connection with the use of Magnesium sulphate, I advise the dehydrated salt as being least objectionable to the taste, and The Abbott Laboratories and other manufacturers have met this necessity with the effervescent product, which is decidedly pleasant and effective.

Magnesium sulphate is not only an effective cleanser of the bowels from intestinal toxins, but, as an application to the surface of the body in many affections, it proves itself a most efficient remedy, notably in acute idiopathic erysipelas. In my student days, this was taught by the late Prof. Saml. D. Gross, and my first experience with the disease was during my service as a Medical Officer on duty in Dakota, in the winter of 1872-73, where there was an epidemic of the disease among the soldiers with whom I served. The treatment was: The application of a saturated solution of the magnesium salt to the diseased surface and small doses of the same internally as a refrigerating draft. This last was given in lemonade. In all cases, the cure was rapid and the men returned to duty after two or three days in the hospital. I will add that I have continued this treatment of acute idiopathic erysipelas during over fifty years of practice and without a single failure.

In many skin diseases, the magnesium-sulphate bath proves an excellent adjunct to other treatment. It also affords great relief as a compress in all inflammatory conditions of the respiratory tract, and may be used either hot or cold as preferred or indicated.

Manganese Arsenate

Manganese oxide in chemical combination with arsenic acid.

Physiological effects:—Hematinic, alterative and nutritive tonic.

Therapeutics:—Useful in anemia, chlorosis, leucocythemia and in leucorrhea, amenorrhea, etc. Can be combined, with excellent results, with strychnine and iron arsenate and with the combination of Nuclein with the phosphates of iron and strychnine.

Dosage:—1/64 to 1/6 grain: the smaller dose for children, after meals.

Mercuric Chloride

(Corrosive sublimate)

Salt from the combination of two atoms of chlorine and one of mercury.

Physiological effects:—Powerful antiseptic and escharotic. The physiological effects of the bichloride of mercury are similar to those of the mild chloride (Calomel) of the same base. It is a corrosive poison and, in large doses, provokes an acute inflammation of the

tissues from contact as well as by absorption.

Therapeutics:—Useful in syphilis, especially in the early stages; in acute dysentery and diarrhea, also in ulcer of the stomach. Topically it is advantageous in cases where the disease depends on, or is maintained by, the presence of microorganisms. The average proportion of the antiseptic solution of bichloride of mercury is one per thousand of distilled water.

Dosage:—1/128 grain, one every three or four hours, to effect. Use cautiously.

Mercuric Cyanide

Physiological effects:—Alterative, antiseptic, tonic.

Therapeutics:—Useful in diphtheria, membranous croup and syphilis.

Dosage:—1/128 gr., one or more up to a maximum daily dose of 1 grain given cautiously and preferably in solution.

Mercuric Iodide

(Biniodide, red) ($Hg. I_2$)

Physiological effects: — Alterative, germicidal, antiseptic, antisyphilitic and emmenagog.

Therapeutics:—Useful in syphilis, especially secondary; syphilitic rheumatism, lupus and other chronic dermatoses.

Dosage:—1/12 grain to 1/64 grain of the smaller dosage. One every two hours. Effect should be cautiously watched.

[*To be continued.*]

DR. BRYCE'S TALK

Hoist by His Own Petard

It is a real pleasure to most of us with any human nature in our make-up to see the designing plotter caught in his own trap. I always enjoyed the Bible account of the hanging of Haman on the scaffold that he had built for his enemy, and the downfall of the mighty Goliath when little David rocked him to sleep. The case I am relating describes simply the unsuccessful effort of an older physician to ruin the future of an unfortunate young doctor at the very outset of his career.

There lived, many years ago, on a good street, a middle aged physician who enjoyed a good practice and was in comfortable circumstances. We will call him Dr. T. Living in his block, was a young man whose widowed mother rather overindulged him in spending money from her limited means. The young fellow decided to study medicine and "read medicine" under me. After attending the two short sessions then required at the local college, he graduated.

He was from every angle a remarkable young fellow and at once seemed to become the especial object of Dr. T.'s observation and unfriendly criticism. He was red headed, freckle faced, very slim and tall, as smart as a brier, a good talker, drank whisky enough to keep him sprightly and gay, and the thing that almost ran Dr. T. mad was the fact that young Dr. "Charlie" G. opened a fine office within a few doors of him, dressed in heavy style—long Prince Albert blue-cloth coat, white vest, patent-leather shoes and an unusually tall silk beaver hat, with appropriate brilliant tie and kid gloves of proper color and fineness. In other words, he was a swell of the first order. To finish his triumph as a competitor, he equipped himself with the very latest in equine and vehicular transportation facilities.

In those days, many physicians walked to see their patients in the cities, those better off indulged in horseback travel or possessed horse and buggy, but the very acme of professional elegance and style in visiting one's patients was the top buggy and a pair of nice horses. Dr. T. drove two and had a top buggy, but he soon realized that he was not "the only pebble on the beach"; for, within a few days after Dr. G. swung out his shingle, a pair of beautiful sorrels hitched to one of Brewster's stylish top buggies stood in front of Dr. G.'s office champing their bits and restlessly pawing the earth.

This was before the days of the automobile, and the hypodermic syringe was just growing into popularity. Unfortunately, our young friend was a very handy man with his hypodermics when patients were in pain. He was also frequently a little "high up" from occasional potations of Spts. Frumenti, although usually under perfect control.

For a while, he cut a wide swath and took a lot of practice from right under the older doctor's nose, but the old fellow had learned that all things come to those who wait. One day, poor "Charlie" took just a little too much and shot his hypodermic, a little too heavily loaded, into a lady sufferer, leaving her snoozing sweetly while he and a friend took a drive behind those flashy sorrels; ten miles on the Brooke Turnpike. In the meantime, the fact that his sleeping patient was growing slightly stertorous, alarmed the family and not being able to find Dr. G., they summoned Dr. T. who, seeing that she was suffering from an overdose of morphine which, as he learned from her sister, had been administered by his hated rival, promptly shot a big dose of apomorphine hypodermically into her system.

When poor young Dr. G. returned from his

dri.e, somewhat confused from his own overcharge of his favorite drink, he was astounded and quickly sobered to learn that his patient had died during his absence of a few hours and a summons had been issued for his appearance at the coroner's court, next day. He had heard that he was suspected of having caused her death by administering an overdose of morphine, while under the influence of whisky. He believed that Dr. T.'s opportunity had come and that his evidence was going to ruin him. The morning papers had a full account of the case with the presumption that he had killed the woman, all of which was read before the convening of the coroner's court.

My young protégé sought me early next morning and told me that he felt sure that they would saddle the patient's death on him and arrest him upon the verdict of the coroner's jury. He requested me to be present and "stand by" to render all possible assistance to him in his distress. I told him to have his lawyer present, and we three would follow the testimony and try to see who killed the patient.

When we entered the court room, Dr. T. was on hand and came up promptly, shook hands with us all, and added that he was sorry for the unfortunate position Dr. G. was in. There was one thing about my young friend that could always be counted upon; and that was, he was no fool and true blue when courage was demanded. On this particular occasion, there was no smell of whisky upon his breath, his nerves were steady and his voice measured when he looked the doctor squarely in his eyes and asked him:

"What the hell do you mean by that remark?"

A prompt apology followed. The young doctor walked forward and we sat down together.

It is wonderful what a word spoken at the psychological moment is worth. While Dr. G.'s remarks were not overelegant, they certainly created a decidedly favorable impression for him in the crowded court room.

As the case proceeded, Dr. T. stated that he was called to see the woman after Dr. G. had administered morphine, that he found her fully under its influence and in a serious condition, and that he gave her a hypodermic of apomorphine. But, in spite of all efforts, she died. He was so eager to give damaging testimony that he forgot that the woman had no morphine in her stomach to throw up, and that the administration of another deadly poison was malpractice and contributed to intensifying the action of what she already had in her system.

Not until my young friend's lawyer asked him why he gave apomorphine in this case, did it dawn upon him that he had trapped himself and in all probability ensured the patient's death. It was almost painful to notice him squirm and twist and turn alternately red and pale as he finally laid his blunder on his excitement over the woman's urgent symptoms.

The coroner and Dr. T.'s friends patched up some non-convicting verdict that let him out and, of course, turned my young friend loose, who, as he passed by the much chagrined doctor, said in a very audible voicé to his enemy, "Maybe you know who killed Cock Robin?"

It was a close call for the young doctor and a good lesson for them both. The elder man learned that, being overzealous in trying to undo a competitor or an enemy, might actually help him; and the younger doctor profited by the knowledge that he had been his own worst enemy.

Over-Treatment in Urethritis

I am satisfied that many of our cases of chronic urethritis, or socalled gleet, drift into this condition of chronicity from aggressive and continuous treatment, under the one idea that they are kept up by the presence of the gonococcus and that the fight must be for its destruction rather than for the reduction of simple inflammation by measures appropriate to all inflammations, regardless of their etiology.

I have been very forcibly reminded of this frequent mistake by a recent case coming under my care about two months ago. The patient was a vigorous Armenian, about twenty-eight, who said, he wanted me to cure him of the "claps," which he had had for over two years. Examination showed a drop or two of pus at the meatus and a burning, more or less intense, upon voiding the urine. Sexual excitement or coitus would usually start up a pretty good flow, or a "new case," as he termed it and sent him back to a doctor.

Under these conditions, this man had been more or less continuously under all manners of treatment for more than two years. He had run the gauntlet of the abortive, or quick cure, attempts, then injections, bladder washings, retrojections, sounds, prostatic massage and milkings, and finally vaccines, but with no earthly benefit or any show of cure. He

was worrying over a supposedly serious trouble, earnestly desired a *quick* cure, was credulous, and had a bank account. With this before me, I was not surprised that he had been *continuously* treated, nor that he was suffering from these frequent assaults upon his helpless urethra.

If ever a man needed a good honest talk, this poor fellow did; and I tried to gain his confidence. I explained to him that, regardless of the specific organism giving him his urethritis, it should be treated on general principles like an inflammation from any other cause; that rest and sedation favored recovery from inflammatory troubles; and he had hurried his physicians and made them do much that they would ordinarily have left to time to accomplish. In this way, he had gotten a chronically inflamed and sensitive urethra, and, now, the most rational thing to do was, *to do nothing*; in plain English, to allow himself to get well.

These patients are always anxious to be cured quickly and feel that, unless the doctor is constantly doing something for them, they are losing time with ever lessening chances of recovery. In this way, the physician too often yields his better judgment and tries, first one thing and then another, actually keeping up the trouble, until the patient changes *him* off for another doctor, and then the same old game of overtreatment goes on.

Fortunately, my patient took a reasonable view of his case and agreed to follow a Fabian policy of letting the enemy wear itself out, as it were, with a modicum of very gentle medication. Finding that he had neither stricture nor ulcer, one or both of which I suspected, I put him on a mild injection of Ext. Witchhazel with boric acid, until his few morning drops disappeared, which was within ten days. I then went back to an old favorite of fifty years ago, which was an emulsion of Balsam Copaiva, Spts. Lavender Co., Fld. Ext. Cubebs, and Fld. Ext. Ergot. I withdrew the injection and kept him on this most unpleasant mixture for six weeks. It permeated his entire make-up and kept his genitourinary tract entirely coated with this balsamic and soothing output, so that he was entirely relieved of all smarting or tenderness upon urinating. Of course, I made him avoid all stimulating foods and condiments, forbade his even thinking of a woman, and did my best to take his "courage" down with sexual sedatives. Today, I consider him well; but I shall keep him on probation for two months. If he shows no more symptoms of trouble, I shall tell him that he can safely make the girl who has waited so long for him his wife; and, the sooner the better.

So well satisfied am I of the great value of rest and general sedation in the treatment of gonorrhea, that I now resort to depleting measures and, when it is possible, put my acute cases to bed until active symptoms begin to subside. Of course, most of our patients cannot do this, for fear of exposure, and have to be treated "on the wing." For the same reason, they cannot confine themselves to the ideal dietary. I have so frequently seen cases of this trouble get well without a single germicidal or other injection, and only under mild and soothing diuretics, rest and light diet, that I rely as much on *six weeks* of strict obedience to these details as I do to more active treatment.

I do not undervalue the role of the gonococcus, nor the helpfulness of the silver salts in checking its activities, but I do not wish to overestimate either. *In medio* is a more satisfactory route. I will add this last caution: Never promise or *attempt* to abort any case of gonorrhea. Never set any limit within which you will promise to cure a case.

For, that belongs to the unknowable, as the following case demonstrates, at the same time introducing a rather novel remedy.

A middle-aged man came to me, many years ago, with an acute case of urethritis. He was a foundryman, plethoric, active and a full eater. I told him to do as I ordered and I expected to have him well in a few weeks. He said, "I don't know, doctor, this trouble is mighty hard to cure on me."

The man was a good patient and, I believe, followed my instructions literally.

After about six weeks he had lost considerable flesh under restricted diet, salines liberally used and balsams *ad nauseam*, but he had severe *ardor urinæ*, and was running a line of pus by day and walking the floor by night with a mighty curve in his hose pipe.

I got busy from then, discarded my tender and conciliatory tactics and injected that urethra strenuously and alternatingly with nitrate of silver, sulphate of zinc, sulphate of copper, red wine, aq. ext. opii, and everything else I could think of, but without any moderation in his symptoms. Internally, I had filled him with copaiva, cubebs, sandalwood oil, turpentine, logwood, hydrastis, alkalines, bromides, buchu, witchhazel, etc.

Six long, painful months had passed for *him and me*, and I candidly told him he would have to leave it to *time* to cure him.

"Then you think you cannot cure me?" he asked.

"Not *soon*," I said.

He looked at me blankly and said: "Then I 'spose I can stop everything and eat and drink as I please, if *time* is all."

We parted company, both of us mutually disgusted with that case. Some two months afterwards, I saw the old one-horse police patrol backed up to the street curbing, and three burly policemen endeavoring to get an unruly drunk into the rear of the old wagon. The fellow was my old gonorrheic, but in full flesh, strong as a mule, and giving a good account of himself in the struggle.

As I got opposite the busy quartet, he seemed to recognize me and, ducking his head under an officer's arm, opened up a passage for a talk with me. "Shay, you, doc, you ain't wurf a dam to cure the claps. I'll tell you whush cure me, rum and honey.—"

C. A. BRYCE.

516 N. 10th St., Richmond, Va.

BAREFOOT AND CRAWLING CURE

How can we account for the fact that more children die in the wealthy districts than in the slums? One reason is, that the poverty-stricken parents in the latter cannot buy shoes and stockings enough for all their children to wear continually and, hence, many of them are barefoot much of the time and are consequently immune from diphtheria, a disease that exacts a high death-toll from children warmly shod and heavily muffled with clothing.

In a very thoughtful and really invaluable article on diphtheria, in the *Medical Times* (New York) some time ago, Dr. Thomas related some very significant points from his experience as physician with the missionaries in Turkey-in-Asia, during 18 years. He said: "When I first went out there, I was often very much pained at the sight of the native children with their naked feet, blue with cold; but as the years went on, and I found that these barefooted urchins never had severe sore throats or diphtheria, while the shod and stockinged children of the missionaries were frequent sufferers from the disease, I grew entirely reconciled to the condition and urged the parents among our missionaries to adopt the custom."

The writer's five children were never shod or stockinged indoors, winter or summer, and they went barefooted out-of-doors much of the time, in summer, until 10 or 12 years old. Moreover, none of them but has run around the house time and again in a foot of snow, barefoot and barelegged, just for a lark. "Catch cold?" never once. But, coddled and muffled children are constant sufferers from the disease.

Another point of great importance; our babies were placed right side up at birth, namely, on the belly, so that they had the same opportunity for physical development, on all fours, like kittens, and they were creeping about the house at seven to ten weeks old, creeping away from the grave, so to say. This plan has worked satisfactorily in hundreds of families under my teaching. The common practice of teaching babies to walk is altogether wrong; we should keep them on all fours as long as possible. They'll "find their legs" all too soon through their natural ambition to imitate the movements of their elders. We teach adults to creep, to counteract the down-sagging of the kidneys and all the internal organs due to man's abnormal upright position. Here we have the cause of "floating kidney," prolapsus uteri, hernia, colitis (mistakenly called appendicitis), etc., etc.

When all the suggestions herein come to be appreciated and acted upon universally, there will be few deaths among infants and young children, and the general mortality will be markedly lessened.

All bed-rock students of anatomy, physiology and hygiene know that man is by nature a naked and four-legged animal, the skin being a true breathing organ, its millions of blood-vessels gasping for air under the lightest of drapery and completely smothered under many folds of clothing as commonly worn, meaning a deficiency of oxygen the "mighty scavenger of the vital economy"; hence, the tendency to "colds", influenza and pneumonia.

All our internal organs are, in character and position, just like those of the four-legged animals with whom there is no down-sagging, the organs lying flat on the floor so to say. It is for us a matter of counteracting (in so far as possible) the dropping down of our inwards, by frequently assuming the attitude of the monkey and the kangaroo, instead of remaining forever upright.

CHARLES E. PAGE.

Boston, Mass.

[In connection with Doctor Page's interesting suggestions, the reader is referred to an editorial appearing on page 465 of this issue of CLINICAL MEDICINE.—ED.]

COMMERCIALISM IN MEDICINE

To the old practitioner, nothing seems more deplorable than the growing and almost ever-present spirit, or thirst for mere money which exists.

While we may deplore this feeling in its exaggeration when seen in other pursuits, in medicine it seems as though it should not have place—at least, it should not be primary; it should not neutralize in a way, the most beneficent of all arts when practiced with a due sense of our high calling. To me, specialism has not a few drawbacks, but this, the former one, is the most grievous. In all specialties, men become very narrow-minded, above all, the most successful one, as regards lucre and practice. They are very busy and constantly going through the same routine, day after day. Unfortunately, this routine work does not develop in them a broadminded, elevated manhood.

It is at least unbecoming in them, in thought or deed, to ignore or decry the old practitioner. They say and circulate the view, frequently, that he is a bygone number and of a time when true service did not prevail. Alas, for such statement! He it was who knew the body in all its phases; he it was who, also, knew the sick man's feelings and sympathies, his needs and wishes. Knowing them all, as he did, he could minister to them. Thus, he brought untold, almost miraculous relief, at times, to the sufferer. Also, he developed within himself that fineness of thought which develops and adorns highest character.

How could such a man grovel in the dirt, so to speak, and first of all have in mind, what pay am I to get? Could, or would, mere money be the answer? Never! He might pass many long, dreary hours by the bedside in cases of great pain and with almost hopeless outlook, except for the divine Comforter. He might go through storm and stress of fatigue and anxiety. But, his God-like spirit did not fail him. He was there, ever animated by the spirit of service, to do his best by his fellow man. And, did he not accomplish it? To my way of thinking, he certainly did.

This new-found science, this product of the laboratory, does not make real, all-around practitioners of medicine; it rapidly stunts and belittles them. And, now, the outside world is beginning to realize it and to know how much they have lost in the passing of the true, beloved physician.

Will he come back again? Surely he will—and just so soon as men return to the simple life in belief and doing. This must and shall be, because God rules and He rules not in either socalled modernists or fundamentalists, but in the heartfelt religion, which simply follows what our blessed Savior said and did. Churches, forms, ceremonies, they are a very feeble and imperfect evidence of what He showed to all men. Let us emphasize and show it, in everything we do.

BEVERLEY ROBINSON.

New York, (Memorial Day).

—

[To us, the "old practitioner" always has been an impressive rather than a negligible figure; an example to be emulated rather than one that has been outlived and overshadowed by modern acquisitions. The old family doctor, as Ian MacLaren depicted him, as times of storm and stress and of necessity developed him in our country, will not come back, because he never went away. He is still with us, to be found here and there; no matter what moderns, proud of their superior science, may claim.

Doctor Robinson is right. The people are finding out that they want physicians, practitioners of the true science and of the ART OF MEDICINE, men and women who give personal, individual service to men and women and children, rather than doctors of medicine (and philosophy, perhaps) indulging in interesting and fascinating (to them) observations on "clinical cases". Let us remember that honest, personal, individual SERVICE counts practically. That is what develops and ripens the physician.

Not that we would decry the scientists. They are needed. It is to them that we look for the means of progress. But, purely speculative, investigative experimentation has no place in the day-by-day practice of medicine in all its branches. The *practice* is interested only in that which we know, as far as it is knowable. Science is concerned in what may be found out; also it may find explanations for those things that we know empirically but for which reasons are lacking.

Are we heretical? Would we lower the standard of medical practice? By no means. What we insist upon is, that the practice of medicine is concerned with individuals, with personalities, with John and Sue. They want more than cold, calculating science. They are more than just sick hearts or lungs or stomachs or eyes or ears. They feel and think and worry and fret; and they claim the right to strive for health, wealth and happi-

ness. Mere mathematical formulas will not aid them. The personal factor often will do more than "treatment" based on purely scientific laws.—ED.]

GERMAN MEDICINE AND GERMAN PHYSICIANS

[A few weeks ago, a young friend of ours, who made a *Studienreise* to Germany, sent us his impression of conditions as he observed them during his stay in Berlin. From his letters, we have excerpted a portion which will be interesting to all physicians. We hope to secure a more complete report from Doctor Abramson, after his return to this country, and shall offer it to our readers as promptly as may be.*

The article from Professor Hamburger, which has been promised us, will be highly welcome and may afford the occasion for a special babies' and children's number of CLINICAL MEDICINE. Such a special number ought to meet with the approval of our readers. However, we will let our correspondent take the floor.—ED.]

—

The second day after my arrival to Berlin, I was already registered in the pediatric clinic of Dr. Czerny, in the Charité hospital. Professor Czerny himself is a wonderful teacher and clinician. His teaching abilities equal those of the late Dr. Murphy, of Chicago. In Berlin, and perhaps all over the world, he is considered the father of modern pediatrics. He wrote an excellent book on pediatrics which passed through many editions and is now not to be bought anywhere. He has many assistants who really conduct the postgraduate courses in pediatrics. The fees for these monthly courses are considerably high, $12.00 for Americans. For nationalists of other countries, the price is set according to the value of their money in comparison with the American dollar.

The American dollar, by the way, is the standard not only in money matters but in every other thing that can be bought or sold. It is also the ruling passion of almost every German inhabitant to acquire dollars, and it makes no difference what means have to be applied in order to obtain them. In a true Jesuitic position, believing that the end justifies the means, the average German, from the porter up to the professor, is on the chase after the almighty dollar in a far superior measure to that of which we Americans were always accused. It is painful to see how the waiter, butcher, grocer or hotel keeper is trying to *do* you and cheat you of a few hundred marks. At first, the Americans are a very easy prey to the open robberies that the German tradesman is putting over you; but, we soon find out that we are so brazenly cheated that the Germans consider us foolish "Michels" and we resent this more than the loss of a few thousand marks.

Life, i. e., the cost of living, is very high for the Germans; it would be comparatively cheap for the Americans, if we paid the same prices that the Germans do. This, however, is not the case. Here is an illustration: I was asked, as monthly rent for a room, 250,000 marks. I refused to pay so much and offered one-half of the sum asked. My offer was rejected, but, at this very time, a German came and got the room for 6,000 marks a month.

Examples of such discrimination between natives and *Ausslænder* are a daily occurrence. This discrimination becomes especially annoying when you recognize in it another expression of *hate* towards the stranger. Of course, it acts as a boomerang to the German people themselves; for, every stranger returning to his respective home entertains very few fond recollections of his stay in Germany. I am almost positive that the war was lost for Germany partly on that account. The world at large had no sympathy for that country.

—

Outside of being unfriendly, the Germans are after all a wonderful people, virile, active and thorough. I judge it from the work that is done now in the medical field.

Gigantic strides are made in all branches of medicine and, in many respects, we are half a century behind them. I am arranging with Dr. Hamburger, the *Oberarzt* of the Charité Kinder-Klinic for an article for your journal. [Thanks. We hope that it may materialize soon.—ED.]

The description of the *status economicus* of the German physician is a theme unto itself. The American physician is a millionaire in comparison with the members of the German medical profession. Most of the physicians in Berlin can not work enough to pay their rent. The average fee for consultation is so low that they can not even buy half a pound of butter for it. How they get along, goodness only knows. Verily, the "Herr Doktor" is worse off than the street cleaner.

No wonder they are such well-read men. They have nothing to do but read and visit

*As we go to press, we learn that the doctor has arrived in New York.

clinics. You find them almost in any clinic, following the professor. They don't even go home for dinner. They carry their *Butterbrot* with them and nibble at it whenever they get hungry. Since imitation is one of the methods of learning, the visiting doctors from all the corners of the globe do likewise, and it is nothing uncommon to see a row of doctors eating quickly their sandwiches while the professor speaks about the differential diagnosis of tapeworm. Observing the doctors as they chew their food, one may take them for the best living examples of the hunger symptoms of tapeworm.

One gets the impression that the German physician is an eternal student and is more interested in the speculative phase of medicine than in the practice of it. No wonder then that therapeutic success is found only in patients treated at the clinics. That the patient privately treated does not get along so well, is admitted both by the physician and the laity. A few weeks later, I hope, I'll be able to write with greater precision about the conditions prevailing in this country.

The present abnormal situation makes it difficult to distinguish between the real customs and those imposed upon the present conditions.

Everything is topsy-turvy now. I only hope that the situation will soon change for the better, for the German people certainly do pay for the sins of their Kaiser and their military leaders.

—

I spent two months in the Czerny Clinic and also took some work with Ludwig E. Myer, the associate of Finkelstein. Both, Czerny and Finkelstein, are considered the pillars of modern pediatrics. They are certainly real masters and it pays to get acquainted with their teachings.

Of the two, Czerny is the better teacher, since he has been doing it for more than thirty years. Doctor Myer is a better teacher than Finkelstein and he is, therefore, chosen as the best representative of the Finkelstein school in preference to Finkelstein himself.

In addition to the clinical work under the above-mentioned *Herr Professors,* I also take a course in pathology, macroscopic and microscopic, and I assure you that this course alone is worth the trip.

During the lecture hours, we have the opportunity to examine between 8 and 10 autopsied bodies, Prof. Zeilin pointing out the pathology and explaining the mechanism of the symptomatology presented by these patients, as recorded in their *Anamnese.*

This course is taken exclusively by Americans, and we all agree that such counsel is not to be gotten in America.

—

Speaking of Americans, I must tell you that we have recently organized a medical association similar to the one existing in Vienna. We hope thereby to attract the American physician who comes abroad to study. Berlin has wonderful facilities for P.-G. work and, some believe, even far superior to those of Vienna.

The trouble was that the newcomers didn't know where to go and to whom to apply for information. Now, we have a permanent secretary who knows medical Berlin well, since he is himself an M. D., and anyone can find, with his aid, any course he desires to take. We hope to enlarge the membership and make the A. M. A. of Berlin a worth-while society.

The medical world is stirred by the news that Wassermann found a specific reaction for tuberculosis, similar to his reaction for lues. How much it will further the progress in the treatment of tuberculosis, remains to be seen. It is noteworthy that most of the clinicians do not believe in the efficacy of tuberculin or in any other specific remedy for tuberculosis. Rather do they rely upon the non-specific protein therapy and use a great deal of plain horse-serum or bovine serum.

There are many new therapeutic measures advocated in Germany of which I never heard before. They are all in my notebook and I hope to verify their use in my own practice.

B. W. Abramson.

Berlin, Germany.

THE STANDARDIZATION OF BIOLOGICAL STAINS

On March 2, at the Chemists' Club in New York City, there was held a meeting of the Executive Committee of the Commission on Standardization of Biological Stains. Beside the members of this Committee, the meeting was also attended by C. H. Herty to represent the Synthetic Organic Chemical Manufacturers Association, and by F. P. Garvan and W. F. Keohan to represent the Chemical Foundation. The meeting is a matter of interest to every member of the medical profession.

All physicians realize the need of dyes for staining specimens in the laboratory diagnosis and investigation of disease. It is not perhaps so generally realized that, in order to give constant results, the dyes used for this purpose must be of very precise chemical com-

position; and yet it is a very difficult matter for either the chemist or the biologist to control their composition. Before the war, all stains were imported from a single German firm. This firm did not manufacture stains, but bought textile dyes in batches of considerable size, and, after some preliminary testing, bottled them and sold them under its own name to the biological laboratories of the world.

When the war broke out, the American laboratory was deprived of this foreign source of stains. After the pre-war stocks already on hand had been given out, much difficulty was experienced in getting stains of the requisite quality. The Society of American Bacteriologists began an investigation of American-made dyes that were being sold as biological stains. The results of this investigation were so promising that it proved possible to secure the assistance of the National Research Council, through whose agency a cooperative investigation was arranged among the members of several national societies. Recently, the work has been organized under a special commission, independent of the Research Council but still representing the different national societies that were cooperating in the earlier work.

At the executive committee meeting of this Commision, just held, the very encouraging results of the work were reported. It was shown that already the stains available in America are in practically all cases as good as, and sometimes better than, the best of the pre-war stains. The most important fact brought out at this meeting was that, while the pre-war stains were standardized only in an empirical way, because large batches were bought without the exact composition of the dye, they must now be standardized on the basis of pure chemicals.

The reason for this is, that it has been proved that, in some cases, the impurities present in the pre-war stains were very necessary. Sometimes, these impurities were other dyes and at other times supposedly inert materials, like dextrin. In all such cases, the task plainly before the Commission is, to find out what the impurity is which was responsible for the good staining qualities of the impure product. Then, in the future, the users of stains must demand that these impurities be present, not as impurities, but as intentionally added ingredients. When this has been done and the products are labeled and used accordingly, the American stains will become standardized in a true sense of the term.

Very shortly, the Commission will begin issuing certification of definite batches of stain that it has found satisfactory. These stains will be put on the market under a special label bearing the name of the Commission. Users of stains must be on the lookout for products bearing this label.

Buyers of stains must also watch for spurious imitations of this label put out by unreliable concerns. Any form of certification appearing on a stain label not bearing the name of the Commission is merely a certification by the manufacturer or dealer himself, and as such has no value.

The Chemical Foundation has very kindly agreed to support the work of the Commission financially.

EMPTYING THE STOMACH IN SICK HEADACHE

I desired, but failed to incorporate, in my article on manual pressure (CLIN. MED., June, p. 447), as a means of relieving sick-headaches, mention of the fact that, in cases where the spasmodic closure of the pylorus muscle is a reflex from a diseased or irritable gall-bladder, it may be possible that pressure of the hand, as detailed in the article mentioned, may prove unable to force retained stomach contents into the bowel; the spasm persisting. In these cases, it will be necessary to reinforce the above-named method by the application of heat, as from a hot water bag, over the gall-bladder. This heat should be kept up as long as necessary to entirely relieve the headache; which usually is only a short time.

J. A. DUNGAN.

Greeley, Colorado.

AMONG THE SOUTH-AMERICAN INDIANS

Have just seen a three-year-old child with many sores on all parts of body, from head to foot, caused by bites of *cockroaches*. The parents have a good little farm, but said that it was very difficult to purchase a mosquito net. Stingy, I think.

Am mailing a fruit said to be a good purgative. A man living three hours' walk from here took a dose on Wednesday; suffered colic and diarrhea till Saturday p. m. At daybreak Sunday, I gave a remedy. Monday noon, he was O. K. I left for home. [The package was lost in the mail.—ED.]

Said to be used by removing shell. To about one-half cup of boiling water, take fruit in

right hand, insert in water and, for a child, make one circle around cup; for youth, two circles; and for adults, three. This man must have made more than three or, maybe, he used the *left* hand.

Smallpox appeared here about July 10. Nobody seems to fear it more than measles. Some use medicine, others none. Nobody says anything about vaccination or quarantine. Nobody tries to avoid it or to keep children away from it. Can't be very bad with some. In the same house in which I live, a six-year-old boy was well broken out and I saw a three-year-old sister playing in bed with him.

Later.—The boy recovered. His skin sloughed in patches like a snake; he is now big, fat, and enjoying life. Sister came down in due time. Made quick recovery. Only four deaths, all among the very poor, with scarcely any attention—none medical.

Competing with Dentistry.—A man told me that, at some point low down in the Caqueta valley, a Jesuit priest was visiting a tribe of Indians (name not given). When he was taken with a severe toothache, having nothing to relieve it and having suffered much in the past, he told the tribal medicine man that he would be glad to be rid of all his teeth. The medicine man said, he would give him relief. He left him alone until he could go into the forest and gather a handful of leaves. He gave the priest one, telling him to chew it slowly until it was very fine, then to spit it out. He did so, and the offending molar ceased from troubling him. The medicine man gave him another leaf with the same instructions. Upon spitting it out, the tooth went also. He gave him others, one at a time and, with each ejected leaf, went a diseased tooth—no sound ones. But the grand surprise came when the priest awoke from a long peaceful sleep and found that each place vacated by a diseased tooth was filled by another as sound and beautiful as those of his childhood. He offered immense rewards for the secret, but the medicine man refused all, saying it could never be revealed to white men.

Ask your dental man to give you his opinion of this.

An Unusual Use for Eggs and Toilet Powder.—Early, one forenoon, a man came hurriedly to me and asked "what is good to stop bleeding? A woman has been cut and we have filled the cut with powdered lime, but the blood comes in jumps."

I asked if she could walk; he said, "Yes." Then I told him that I was the best thing to stop bleeding. He soon brought her, 7 or 8 other women accompanying them. While I was dressing the wound, she was about to faint. We took her from the chair and laid her on the floor. Another woman got an egg from the kitchen, and, breaking the large end of the shell, stirred the contents and gave it to patient. She did not faint.

The wound began 3 inches above the annular ligament in the left forearm, extending downward, ending at the middle of the root of the thumb nail, severing the radial artery. I readily checked the hemorrhage, cleaned out the lime, brought the wound together with adhesive, applied all the "Dermal Antiseptic" I had. I dressed the wound again the next day, using a U. S.-made toilet powder.

This patient came for 4 or 5 days and, if there was any pus, it was invisible.

The wound was inflicted by the husband on his wife during an argument about some trivial things. It cost him a $10.00 fine. You may say, that was nothing, but, if you figure daily wages 20c (twenty cents) it will require some labor to earn it.

GEO. MOTT.

San Vicente Caqueta, Colombia.

THE REASON WHY!

From some editorial remarks, on page 241, of the April issue of our favorite periodical, announcing Dr. C. A. Bryce's contributions, of which we have just had an illustrious example, I may infer that many readers are inclined in favor of the practice of birth control which I have "criticized so absolutely" in my March contribution. My article was chiefly intended to give those who are interested some much needed information regarding federal maternity work, which is at least as important in the government Sanitary[1] Service as prophylactic work in contagious diseases is in the U. S. Public Health service, for instance the regulations governing the employment of persons affected with infectious diseases, and physical examination of "food handlers," etc., stricter attention to which is at present being enjoined on health departments, and by them upon the physicians. Considering what abominable, unsanitary conditions are permitted and like methods practised by the "birth control" doctors, it is very much in the interest of public health that the truth should be known. The facts are mostly known to gynecologists, and it is quite conceivable, I was nearly going to say pardonable, that editors of medical journals should be much impressed by theories

[1] I wish I could say "Educational."

which undoubtedly speak aloud in favor of birth control; because these editors don't practise medicine.

While with a limited experience, I was, at first, also on the side of those most scrupulous men who recommended proper methods of prevention of conception, in the belief that, under the control of competent specialists, only ideal conditions and most exact methods must always prevail. My position then was made clear in a footnote to my article in *American Medicine,* quoted on page 199 of last month's issue.[2]

Gradually I learned the true facts which taught me how the evil consequences outweigh the good intentions.

Therefore, the motive for my attitude declining "birth control" is the fruit of much observation of what has been done in the past, and its results. My experience has shown that it is not in the best interest of the patients to give them an opportunity to follow such unsavory practice. If we consent to it in spite of the fact that the patient is injured, it is in disregard of one of the fundamental principles of the therapeutic art, known since ancient times and, by our predecessors clothed briefly in the two words: *nil nocere,* do nothing that might harm your patient.

This is the second and, really, more essential part of the motive why I recommend caution in allowing practising physicians too much independence in their treatment of patients for the prevention of conception.

The collective experience with the methods of such practice and its direct and remote results is again under lively discussion, especially in the state of New York, since the efforts to pass a law, amending the penal code relative to the furnishing by physicians of information and articles for the prevention of conception, have been brought to fruition, a bill to that effect having been placed before the N. Y. State Legislature.

Now, what is the tendency of that experience?

When we exclude the apathetic type, we find that all the patients, no matter what methods they employ, complain to their physicians of unpleasant consequences and untoward symptoms from their indulging in "birth control." On investigation, I, for one, have not yet found one woman of nice sensibilities who was satisfied under the circumstances, even when her husband assumed the anticonceptional burden. Of course, instances of dyspareunia are not considered here. Nervous disorders, mostly sexual neurasthenia, are always the consequence. Serious anatomic lesions are by no means rare, and infections carried upward through the cervical canal (the uterine cavity and the cervix in its upper part are sterile, but not immune), produce parametritis, salpingitis, sometimes pelveoperitonitis.

In my article "Remarks on Voluntary Sterility,"[3] I mentioned the most noteworthy schemes which I had observed women to employ, as for instance the dangerous trick, well known to the European women, of pushing violin strings up the cervix, much after the method by which we examine a tight urethral stricture, beginning with one filamental bougie and adding gradually more.

In the same article, I gave a list of the gynecologic disorders which had come under my observation, as a consequence of the practice which I condemn. I quote from page 297:

"I do not consider myself competent to give definite advice, nor is there any intention of suggesting any procedure recommending any method or implement, but rather of pointing out the unsatisfactory and often harmful features of the customary methods employed by the devotées of voluntary sterility. My article may arouse some physician to seek knowledge and to appreciate his formerly neglected duty when patients consult him regarding means of preventing conception, and he will be compelled to consider very earnestly a question which he used to answer with indifference. No one can deny that it is not necessarily the woman's fault when misapplied articles for the prevention of conception have left the woman either a nervous wreck or her womb and vagina a veritable sewage tank, but many physicians, who have never seriously directed their thought to the actual danger of the frequent interference with a most important and complicated physiologic function, remain ignorant of the pathologic possibilities of the defeated consummation of the sexual act and do not learn in what destruction the misuse of contrivances *"sterilitatis causa"* can result, unless they catch a woman *"flagrante delicto."*

This sums up fairly well the opinion which I had then formed in 1914, after about seven years of observation.

It is naturally always a source of satisfaction to find our own observations and conclusions corroborated in the literature. Only today, I found that no less an authority than Robert A. Gibbons, agrees essentially with my own experience in a very complete mono-

[2] However, the very title of my article (note the italics): "The Problem of Race Suicide, a problem rather of *National Hygiene* and prophylaxis than political economy," (*American Medicine,* New York, July 1909) indicates that I had even then, as early as 1909, recognized the danger to the American women, and that it ought to become a matter of public health concern.

[3] E. H. Pirkner, Remarks on Voluntary Sterility. *Urol. and Cutan. Review,* 18:295, June, 1914.

graph.[4] Under the title: "Induced Sterility," he says:

"This is an interesting division and requires, in giving advice, much thoughtful consideration, especially at the present time, when so many desire matrimony and, at the same time, wish to avoid the responsibilities, expenses and anxieties which in so many cases follow marriage resulting in childbirth. In 'Sterility with Reference to the State' I have pointed out the steady fall of the birth rate, and the 'Gospel of Comfort' (in England) as an explanation, and have mentioned what some consider to be the most vital question of the moment—whether birth control should be left to the actual checks of war, famine and pestilence, or to *preventive checks rationally and intelligently applied* with a view to preventing conception. There are some who believe that the former must invariably continue unless the latter are adopted. Doubtless, these modern checks, or socalled Malthusian methods, are attributed to Malthus by those who have never read his works, etc. . . . he defines moral restraint as restraint from or postponement of marriage from prudential reasons with conduct strictly moral while unmarried.

Now, here, I only want to point out that those methods, which are in many instances adopted after marriage with the view of preventing conception only for a few years, and possibly even for a few months, may cause permanent sterility. I have been consulted by patients who have been perfectly sound as far as the pelvic organs were concerned, whose husbands have been examined and found normal, and who, having adopted preventives for some years after marriage, have discontinued them in the hope of conception following, only to be grievously disappointed. I have also known many who, having had one child, have adopted preventives against conception for several years, and then, wishing to have a second child, have found it impossible. In women, the interference with physiological functions may bring about such changes in the ovaries as to lead to temporary or permanent sterility. Whether the cause be due to arrested development of the Graafian follicles or to some subtle changes in the ovum, it is impossible to say with the knowledge at present at our command. We know that, in some animals, ovulation does not take place without previous copulation, and this leads me to say, as the result of my own experience in questioning patients who have consulted me with reference to sterility, that the sexual appetite has a great deal to do with conception.

We know that absence of sexual feeling has, in many cases, not to be considered, for conception occurs without it; but, as we have learned that in the rabbit the follicles do not rupture unless copulation takes place, and we know that there are many women who can state exactly the date for calculating their time of confinement from the amount of sexual feeling produced by a certain coitus, we may be certain that all those factors leading up to sexual pleasure have a most important bearing in dealing with some cases of sterility. Therefore, *anything which interferes with* what is *purely* a *physiological* process, may *lead to trouble.* Nature is a most implacable enemy and resents any interference with her laws. (All this agrees sometimes almost verbally with what I have said in my previous writings. —Pirkner.) There are some women who, undoubtedly, have congenital absence of the sexual centre; and, in my opinion, whatever takes place with reference to preventives in them, has no effect upon their health nor upon their ovaries; yet, ovulation takes place, as well as conception, in a certain percentage of them. But, in the case of women of marked sexual feeling, not only may their health suffer; but, in addition, sterility is much more apt to result."

The author then mentions "coitus interruptus" as one of the most frequent causes of neurasthenia for the generally well known reasons. Quoting Max Hühner, he says: "The nervous strain of such a woman, with her unappeased, though stimulated, sexual appetite, finally leads to a condition of nervous irritability, sexual neurasthenia, and hysteria. The totally frigid woman knows nothing of sexual passion, misses nothing; there is therefore no strain on her nervous system, whilst in absence of orgasm the state of affairs is just the reverse."

The author continues:

"I have now seen many marked cases of neurasthenic symptoms which have entirely disappeared when the methods adopted have been discontinued. The point of serious interest is that the use of them is followed in a certain number of cases by temporary and, occasionally, permanent sterility, even after their discontinuance.

"I consider it of importance to call attention to this, for such a result is never thought of by those who contemplate matrimony and, at the same time, checks to conception, because it is generally assumed that, by discontinuing them, children may be produced at will. It is at the present moment not uncommon for young ladies contemplating matrimony to consult their doctors with reference to preventing conception, many believing that their medical advisors can tell them of something infallible. There are no such things.[5] It is therefore only right to say that there is nothing certain but abstinence. It is also only fair to point out that, if certain precautions are taken, sterility may be the result in the end, and when, after some years of married life, a child may be longed for by both, husband and wife, bitter experience proves that children cannot be pro-

[4] Robert A. Gibbons, Sterility in Women. London, Churchill, 1923, pages 143 ff.

[5] E. H. Pirkner, Remarks on Voluntary Sterility (*Urol. and Cutan. Review*, June, 1914, page 297): "When the question arises, 'What are anticonceptional means?' the answer must first consider the possible question, whether there are any which can be called anticonceptional, and then, whether those known and employed by the public for the purpose of preventing conception, really do so. True means that can be relied upon to prevent conception are not in existence. All those commonly known have their limitations."

duced whenever desired." The author finally points out how "whatever interferes with normal sexual intercourse, preventing its physiologic consummation on the part of the wife, always in the long run endangers her health" and adds: "I am certain that the vast majority of men do not know this."

From all this, it must appear that, if left in the hands of the women, and even in those of the physicians at the present stage of still rather low requirements for technical equipment (physical no less than instrumental) and for standard of practice, we must recognize a definite *danger* to the women in birth control. The best specialists who, by the way, do not care to devote their time and skill to such practice, can not control the patients after they have once formed the habit.[6]

So, here is the *danger* also to the *physician*, which is a sufficient reason to sound a warning. The chief reason why the authorities, who have the welfare of the medical profession at heart, must make a united front against B. C., is, to uphold the dignity of that profession and to guard the practising physicians from careless methods which are leading licensed regular men into charlatanism.

Besides motives, I have *reasons* for criticising legalized birth control "absolutely," the most important of which would be, that it is least applicable to the needs of Eugenics for which it was first recommended and is mostly intended.

The law, if it is made to serve a general inclination on part of the present-day woman, hits first of all the American woman and must reflect on the success of the American family. If such measures as legalized birth control aimed at such races as the Orientals or the lower type of Jews and, finally, the Italians who are prolific breeders, there might at least appear to be a National justification of it from the viewpoint of the Yankee. But, that such is not the case, we all know. The nations mentioned refrain from adopting those idiosyncrasies, often nothing more than whims, and some of the bad habits which, originated by high civilization, help to deplete that civilization.

As an illustration in point, a short interpretation of an editorial in the best known Italian daily published in this country, may be interesting to many.[7] This editorial was inspired by a resolution taken expressly against the "propagandists of birth control" by the lodge "Roma Intangibile" no. 215 of the order of "Figli d'Italia" (Sons of Italy) on February 15th, 1923. The resolution, covered with 600 signatures, was sent to the Mayor of Albany, N. Y., who is particularly inimical to the proposed law. It designated the practice as "a menace to all the younger generations, present and future, and as an insult to the laws of God and nature." The editorial begins with the words: "What is born in human nature, cannot be destroyed. . . ." Later it continues: "In the Italian tribe, the patriarchal family sense is inborn. . . . The Italian people occupy a place conspicuous for their big families, blessed with numerous children. Although many of our fathers were laborers," the article says, "they lived in the light of American ideals with a devotion of frankly Italian zeal. The results thereof can be seen today in their sons, who are teachers, lawyers, doctors, engineers, or churchmen of high station. If our fathers had followed the theory of birth control, this country would have lost many important men." . . .[8]

"Instead of controlling births, we ought to exercise proper control *after* birth. The idea forms the nucleus of a program of social life, according to which the girls would learn to become real mothers, the young men prepare themselves earnestly for the grave responsibilities involved in the management of a family. Not the theory of Malthus, which has been proved false, explains the Babel of modern social conditions, but economic difficulties due to maniac (*sic!*) industrialism. Here it is, where the remedy must be applied." So far the editorial (translations mine.—P.)

How disinclined the Italians are to coincide with the "American Sin," as a famous author (whose name I do not now recall) has named this practice of indulging in voluntary sterility, is shown in a most practical way by one of my recent experiences. A young Italian woman, in very moderate circumstances but respectable and well bred, came under my observation two months ago, when she had begun bleeding, one week previously, after she had slipped in her bath and hurt herself, believing herself pregnant. She put herself at once under the care of a physician who assured her after an examination that she was not pregnant. I found her pregnant at least ten weeks. Although she has two beautiful, healthy children and had, between them, a

[6]Three months ago, I made such a patient desist from the habit by giving her my "Remarks on Voluntary Sterility" to read. A young woman, with subserous uterine myoma, but she remains under observation.

[7]Contro il "Birth Control," Editorial, *Progresso Italo-Americano*, New York, 1923, Feb. 18th, First column, front page.

[8]The editorial forgets the Italian women. Many of their young ladies render efficient service in the professions and various responsible callings, or are engaged as experts in different industries.

spontaneous miscarriage, she was desolate as I told her that it was uncertain if she would carry this one to term. I made arrangements for all possible precautions to save her pregnancy and had a trained, conscientious midwife keep her under observation. The bleeding never ceased, however, and, because I began to suspect some complication, I went to see her a few days ago, the midwife having been called on a case out of town. Just ten days ago today, she had been suddenly taken with labor pains and severe hemorrhage (so she thought), that she summoned at once, without informing me, a physician who happened to be in the same house attending to an accident. The first thing which she presented to me at my visit, was a fetus about 4½ months old, preserved in alcohol. Of course, she is keeping it for sentimental reasons. To have it destroyed, would probably be considered a sacrilege by her.

That the Jews are much of the same disposition, many among the practising physicians will confirm.

As an official example to that effect, a notice in the *New York Sunday Times* (April 22nd, 1923), stands out prominently: under the head lines: "Synagogue Forbids Birth Control Talk" (this in bold type).

"Rabbi M., who invited Mrs. Sanger to address forum, resigns."

"Borrows a meeting place."

I quote only a few lines from the text: "The fact that Mrs. Sanger was to talk in the Temple today on birth control only became known when the rabbi sent out a printed announcement to that effect. The president of the board of trustees told the rabbi that, under no consideration, should the forum be used for birth-control propaganda. The doors of Tremont Temple were permanently closed to Mrs. Sanger."

The next shock the Trustees received and the one which precipitated the resignation of the rabbi, was this printed announcement mailed on post cards: "The Rabbi of Tremont Temple announces that, owing to the refusal of the Board of Trustees to permit the holding of the forum this Sunday morning at the T. T., Mrs. Margaret Sanger will speak in the Washington Heights Free Synagogue on the subject, 'The Need of Birth Control in America' Sunday morning, etc.

"Note—The Rabbi of the Tremont Temple alone is responsible for this arrangement."

Mr. M., the president, made the following explanation:

"The reason for our refusing the use of the forum to Mrs. S. was simply, because we object to the auditorium of the synagogue being used for birth control propaganda. . . . these notices arrived yesterday morning. As soon as I learned of them I told him that Mrs. S. could not speak in the Temple."

All this may well make the advisers of the American people stop to think.

When it is today statistically shown by information received from Secretary Hoover's bureau that the birthrate in the United States is declining at the expense of the native-born white race, it is not too soon to ask if anything is being done to keep destructive tendencies, such as birth control, in proper bounds.

I believe that these remarks will show to the readers of the previous two issues of CLINICAL MEDICINE that my attitude is well founded upon careful observations of many years, and is built up on deliberations regarding present biologic and ethical problems. Those with whom my reasons weigh heavily enough, may be led to examine the correctness of my warning that irresponsible sex gratification has been injurious to the women and, when permitted by the physician, must be considered a wrong done to those couples whom it has finally deprived of the anticipated happiness of another child, through permanent sterility, a consequence which neither they nor their physicians had recognized. In many cases, scrutinous and precise questioning of man and wife will prove my claims. On the other hand, if no more ensues as a result of my endeavors, those physicians who consider birth control as necessary disregarding the conservation or rather the reestablishment of the integrity of responsible medical practice, are bound to spread the knowledge of new facts, which they have thus ascertained, together with their own propaganda for Birth Control.

E. H. PIRKNER.

Brooklyn, N. Y.

—

[Doctor Pirkner advances some potent arguments against birth control; but these are not sufficient, in our opinion, to call for legislative enactments. Physicians (in consultation, if necessary), should have full liberty to make a decision in the individual case.—ED.]

URINE AS A DIAGNOSTIC AND THERAPEUTIC AGENT*

Little if anything has appeared in medical books or in current medical literature on the all-important subject of urine as a diagnostic and therapeutic agent in the treatment of diseased conditions. We are, however, frequently beset on every hand by new thoughts, new ideas and new realities in the ever increasing desire to mould medical opinion along constructive lines for the amelioration of diseased conditions and the cure of patients under our professional care.

It is the innate desire born of progress which makes the up-to-date physician seek for something that will add laurels to his effort and added success in his professional work. On the other hand, it is well to remember that there are many who will deride something which is new and look upon anything of that nature with many misgivings and even rise to fatuous expressions, particularly so if they know nothing about it except their own *ipse-dixit* statements.

It is only a short time ago that a very prominent physician of Chicago was in my office. I gave vent to my ideas about urine when properly treated, as being of signal advantage in the treatment of diseased states; to which he replied that it could not be of any value as it was the waste product of metabolism.

Such statements cannot be considered other than snap judgment and carry no weight whatsoever with a logical mind. In other words, the employment of urine is using nature's expression of pathological conditions, if it is done in a way that can be utilized by the body. It is a form of isopathy of which Lux, the German surgeon, in 1833, said that "all inoculable diseases contain in their substance of inoculation the remedy appropriate to cure it. Hippocrates taught that the factor which causes a disease is also capable of curing it." Hering said that "the toxins found in the body, properly attenuated, are capable of curing the disease that gives rise to them." Again, such representation is met to greatest advantage in the urinary secretion which drains the body of its toxins and toxic products which can be utilized by the use of the Auto-Bio-Chemic apparatus in making the autogenous product.

The assertion that a patient carries with him the remedy for the curing of his morbid state, cannot, I believe, be successfully refuted. Unfortunately, many physicians fail to take cognizance of this basic underlying principle, while others know nothing about it and will resort to giving drugs equally as hard or harder to eliminate than the pathological condition present.

To illustrate, suppose you have a case which in common parlance is called "a running sore." It is a condition which has in all probability been in existence for years. The patient feels better one time than another. Cleanliness, washes, salves and blood purifiers have been used in vain. The physician has an autogenous vaccine made for him. Some of the symptoms in ultimates are improved, but the effect is short-lived. The treatment does not reach the plane of nature's forces where the disease exists or originated, with the result that a cure is not established and the patient reverts to his old condition. Ointments, liquid preparations and medicines are of little value in such cases. You may suppress the condition by such procedure and thus make the patient believe that he is cured, but it will "tell its tale" on some other part of the body sooner or later. The cause of such a condition is contained in ultimates and is represented by the urinary secretion.

Another example. Let us take a simple case, such as what is ordinarily called a "cold," and note, if you please, the urinary secretion. The urine has a higher specific gravity, a greater amount of total solids, greater acidity and is decidedly more toxic. Nature tries to throw off the toxic waste. There is deficient activity of the kidneys and skin. Very frequently, there is a disturbed condition of the intestinal tract.

—

The physiological treatment for such condition is a 3x or 6x potency of the dehydrated specimen of the patient's urine given preferably in the form of hypodermic injection. In the course of a few hours, the various emunctories of the body become quite active and the disturbed equilibrium is once more back to a state of normalcy.

This fact is not confined to acute troubles, but the same fundamental principle applies in chronic diseases as well.

The use of urine by a process of dehydration must of necessity have embodied in the finished product the causative factors as well as the toxins, ferments, etc., representing the accessory forces incidental to such diseased state. We then have a picture of the remedy which can act in a curative sense upon the

*See, in this connection, the Editorial appearing on page 467 of this issue.

plane corresponding to the diseased condition. To sum up, the cure of any disease must be by a force equal to the diseased condition and on a plane of its own vibratory activity.

—

For the sake of convenience, I divide all diseases into three planes corresponding to their depth of action and the extent to which they become an integral part of the patient's existence.

The first, or superficial, plane corresponds to acute conditions, such as fevers, colds, etc., and is best overcome by the use of the 6x autogenous product. The second, or deep, plane, has to do with diseases which have become more or less entwined with the vital forces of the body and for which higher attenuations are more appropriate. The third, or life, plane corresponds to hereditary taints, scrofulous glands, tuberculous lesions, and old-time conditions due to suppressions by the use of local applications and injections, for which still higher potencies are required to meet the vibratory activity of the diseased state.

—

If we assume that life is a vibration and disease a variation in the velocity of the electromagnetic energy, we must come to the conclusion that disease represents something more than the surface expressions so frequently used, such as hyperacidity, disturbance of the hormones, cell salts or the formation of pathogenic bacteria. These, in the great majority of instances, represent an evolution arising from cause and not from the cause itself.

In some cases, however, you may obtain good results by various forms of treatment, particularly so if the pathological actuality is on the superficial side of life's forces.

On the other hand, if the diseased condition represents an integral part of life itself, your chances for eradicating cause must of necessity diminish in proportion as it becomes a oneness with life itself. The cure in such cases must of necessity revert to the equalizing of the vibratory activity of the diseased state which finds its counterpart in the urinary product. In other words, cause is continued into ultimates and ultimates contain cause. This is best exemplified by the potentizing of the dehydrated urine to the plane of the diseased phenomena. When that is done, you meet the diseased variations arising from disturbances of the sympathetic nervous system, cell salts, hormones, enzymes, as well as the factors incidental to the formation of pathogenic bacteria and manifest disturbances as found by chemical and bacteriological examination of the urinary product.

—

We are governed on all sides by hereditary influence and environment and our ideas of cure have been handed down to us by a mass of prejudice which finds its counterpart in the desire for some remedy which is extraneous to the body and presents itself in a tangible form rather than to depend upon the cure which nature always provides.

It is this deviation from the normal which produces suppressive processes so frequently witnessed by the medical profession. Who has not seen a case of asthma produced by the suppression of some skin trouble? A case in point, Miss L. K., age 28, court reporter, called on me in reference to a case of asthma which she had for years. Attacks come on when she contracts a cold. Examination of the urine showed much indican and an acidity of 80. On physical examination, I found bronchial breathing and very distinct asthmatic sounds. Examination of the nose showed a posterior hypertrophy of the left lower turbinate body. The removal of the growth seemed to give her relief for a short time. I advised her anent the Auto-Bio-Chemic treatment. She said she was willing to do almost anything, if she could only get well. The 6x potency of the dehydrated urinary product was given to her in the region of the biceps muscle, the following day. This had the effect of bringing out a rash on the middle third of the left tibia. She then informed me that when she was teaching school in Michigan she had a ringworm for which one of the local medical men made an application of some salve, with the effect of curing it. Since this eruption was brought out, she has had no trouble for a period of seven years. The last time I examined the urine, it was negative to indican and normal as to acidity. Countless numbers of cases could be cited in which local applications or internal medicaments have produced suppression of some pathological condition, only to tell its tale in some other part of the body. Truly, we can say that suppression is one thing while cure is another. The autogenous urinary product cures from above down and from within out, and cannot under any circumstances cause a suppression of the diseased state.

—

There is little solace in having the urine examined microscopically or chemically when the findings point out that there is Bright's

disease, diabetes or some other pathological condition. It adds a burden, a care to life, that nullifies to a greater or lesser extent the possibility of longevity. It seems more than passing strange how some people will try to postpone an eventuality. Their preconceived ideas anent the diseased condition have not in their belief reached the threshold of danger. Would it not be more logical to use a treatment which brings to the fore any focal infection or rather disturbed phenomena and eliminate it than to wait until such times as the microscope or chemical tests reveal the story too late to rectify? In other words, treat the patient as a whole by the use of the autogenous product and let nature show the fragments. This treatment digs down deeper into life's forces and reveals more to the patient or physician than can possibly be made manifest under any or all laboratory methods. When there is a disturbance in the metabolic forces of the body, there is always a corresponding disturbance in the urine content, ever remembering that a ripple on the water's edge sends its vibration to the distant shore. It is these ripples which the Auto-Bio-Chemic treatment unfolds for you to read the disturbing forces from within.

To illustrate—Wm. M., age 23, shoe salesman in one of Chicago's large department stores. He complained that every morning he would wake up with a headache. He had a variable appetite, belching of sour gas, about fifteen minutes after each meal. Urinary examination showed nothing definite leading to a diagnosis. Examination of the eyes was negative. No nasal obstruction or tonsillar enlargement. Hemoglobin estimation 75. I could find nothing which, in my opinion, was sufficient to cause the trouble. I had made for him the 6x potency of the dehydrated urinary product and gave him one injection. Inside of 24 hours, he called me by phone and stated that he had pain in one of his teeth and it was so severe that he could scarcely stand it. I directed him to go at once to his dentist and have the tooth extracted. This was done and the result was, that no further procedure was necessary as this ended all his troubles.

Mrs. R. B., age 30, housewife, complained about pain in the right side and under the right shoulder blade for over one year. The pain in the side comes with the headache and leaves with the headache, which nearly always lasts 24 hours. She felt tired all the time and her face was very yellow. Her surgeon recommended that an operation for gall-stones be performed. Examination showed that the liver was slightly enlarged and there was a very strong odor to the urine, which contained many bile products. Injection of the 6x potency of the dehydrated urinary product was given in the biceps muscles, with the result that, inside of 24 hours, a very decided pain was produced in the right lower molar.

I ordered it extracted, with the result that all symptoms disappeared in ten days' time. She has had no trouble since.

Many cases of a similar nature could be given. In some, it affects the teeth; in others, tonsils, eyes or some other part of the body. At all times, it points out where the trouble is and it thus remains for the physician to follow it up.

—

It seems but appropriate that I should bring forward some substantial proof as to the toxins and toxic products which are eliminated through the urine. I wish first of all to draw your attention to the work of Dr. McLeod, in his work on "Physiology and Biochemistry in Modern Medicine," in regard to the relative percentage composition of the blood plasma as compared to that of human urine.

Phosphates (PO_4)	0.003	0.18	60
Uric acid	0.002	0.05	25
Urea	0.03	2	60
Potassium	0.02	0.115	7
Calcium	0.008	0.015	2
Sodium	Like quantity		
Magnesium	0.0025	0.006	
Chlorine	0.009	0.27	30

From the above, it must be self apparent that the ratios of the one as compared to the other are much greater in the urine than we find them in the blood plasma. Let us take just two substances, urea and phosphates, for instance. With the former, you find comparatively small amounts in the blood, while in the urine there is 60 times as much. Urea is the greatest diuretic known. With the phosphates, you have equally as much excess in the urine compared with the blood plasma as we find in the urea. There is probably no element in the body which is of greater importance than phosphorus, be it combined with calcium, magnesium or potash. An absense of this element means disintegration of nerve substance in its various forms. The relative increase of practically all of the other substances speaks for itself and supplies the requisite elements in order to make the individual a balanced equation. There is no time in which the blood stream is the same; it is constantly changing. On the other hand, we have the collecting tubules of the kidney and a receptacle, the bladder, to hold the urine

for varying lengths of time Urine is the finished product of metabolism representing changes taking place in the intestines and various parts of the body. The transition from a normal specimen to an abnormal one represents the pathological condition present leading from cause to ultimates which is impossible to attain by using blood.

Again I wish to quote Dr. McLeod, who said that "all the ingested nitrogen, except a small and rather constant amount which is lost by the feces and the sweat, is excreted in the urine. The total nitrogen of the urine has been taken as a measure of the nitrogen or protein metabolism of the body." Commenting further, the same author said "the aromatic oxyacids are normally present in the urine in varying amounts. These include phenol, indoxyl, skatoxyl and various acids. It is believed that the putrefactive decomposition of proteins in the large intestines result in the production of these toxic bodies. The body protects itself by oxidizing them to sulphuric acid to form ethereal or conjugate sulphates which are found in the urine in the form of sodium or potassium salts."

Jaffé, Bauman and Brieger have shown that the products of nitrogenous putrefaction belonging to the aromatic series are excreted almost entirely through the urine. Salkowski says that "it sometimes happens that, when the available sulphuric acid is exhausted in the intestines, the phenols and indols are not found in the urine in the form of sulpho-ethers but in the form of glycuroconjugated acids."

"It is certain that the aromatic substances increase in the urine of subjects suffering from hepatic insufficiency"—Combe.

Muller and Ortweiler showed that, by a meat diet, the production of microbic intestinal putrefaction, the aromatic bodies indol and phenol particularly, were present in the urine in large quantities.

Combe says: "The kidneys are the principal emunctories for the aromatic bodies. It is through the urine that almost all of the substances derived from intestinal putrefaction and circulating in the blood are eliminated; for, they alone can have reacted on the organism. They are first the aromatic bodies indoxyls, skatoxyls, phenols combined with sulphuric acid and in smaller proportion with glycuronic acid. These are excreted as sulpho and glycuroconjugated acids. Second, aromatic oxyacids, the greater part of which are excreted as such, a lesser part as sulpho-ethers. Third, the leucomaines and enterotoxins."

For further elaboration on this subject, I refer the reader to the work on "Auto-Bio-Chemic Treatment."

Surely, it cannot be denied that cause continues into ultimates, which is, the urine itself.

T. WILSON DEACHMAN.

Chicago, Ill.

THE CREDIT BUREAU

The Chicago Medical Society, we are informed, in its *Official Bulletin* for June 2, has agreed to operate a bureau for the purpose of informing a doctor in advance on the financial reliability and paying propensities of a new case before he renders expensive or extensive services. In other words, by knowing from the start that he is dealing with a dead-beat the doctor will take steps to insure his fee in advance.

The *Bulletin* says: "This will be made possible when the Medical Society has in its files a sufficient number of names to make a report reliable. It is obvious that, if we had on record the names of 100,000 or so dead-beats, a report would be worth while, especially since it is more valuable to us to know of a patient's dealings with a doctor than with business concerns. A man will pay his grocer or butcher, but may refuse to pay his doctor.

"Our ability to operate such a bureau depends upon the cooperation of the members of our Society, in that, if each one sends in about 30 names of dead-beats, with a membership of over 4,000, about 100,000 names would be available.

"We know of no class of merchants who do not employ some credit clearing house. The Medical Society is a corporation of which each doctor is a stockholder. Accepting the figures that the average income of a doctor is about $1,000.00, our corporation does an annual business of $4,000,000. Assuming that only 10 percent is lost on dead-beats, this contributes an unnecesary annual loss of $400,000.

This is by no means a new venture, the Credit Bureau committee having been functioning for over one year.

We are convinced that the undertaking is a very excellent one, and one that might well be taken up by other medical societies. In fact, we believe that state medical societies should interest themselves in the problem so that they could make the advantages of a Credit Bureau available to physicians in outlying districts who are not members of the medical societies in cities and towns.

We do not have to question the refusal to render free service, charitable service, where it is called for and where the object is worthy. The movement is one directed against the

dead-beat; and, of all the contemptible curs, the dead-beat who preys upon the physician is the most dastardly one. By all means, let us have Credit Bureaus all over the country; let physicians aid in establishing proper lists of these gentry and, above all, let every single medical practitioner refuse to extend gratuitous service or credit to people so listed, unless they can show that they have cleaned up their pending bills, or unless they pay cash for services received.

VACCINATION IS 2,000 YEARS OLD

"Vaccination is an outgrowth of man's effort to protect himself from pestilence by using nature's methods of defense," says Dr. G. W. McCoy, director of the Hygienic Laboratory of the U. S. Public Health Service. "Primitive man noticed that recovery from a first attack by most diseases gave immunity against other attacks; and, some 2,000 years ago, he began to inoculate his fellows with smallpox when conditions seemed propitious instead of waiting for nature to do it at some time when conditions might be very unpropitious.

"Inoculations against smallpox were made in India and in China as early as 300 B. C. Later, when the disease reached Europe, inoculation went with it, supplemented by a new method called 'selling smallpox'—exposing a well person to contact with one ill with the disease so that, if he survived, he would be proof against it.

"Inoculation differs somewhat from vaccination as devised by Jenner, but the principle is the same. Moreover, long before Jenner's day, it was known that an attack of cowpox gave immunity from smallpox; and records show that men who had recovered from cowpox had themselves inoculated with smallpox to make the proof conclusive. Jenner, however, as he himself says, 'placed vaccination on a rock' where he knew it would be immovable.

"Before the days of vaccination, conservative estimates show that one-third of all persons had smallpox and one-tenth of all deaths were due to it. Today, smallpox is rare. Many physicians have never seen a case; and, where vaccination is consistently practiced, no deaths from it occur. Formerly, smallpox was considered a children's disease; and it still is a child's disease—where infantile and school vaccination is neglected. Witness the Philippines, where, four or five years ago, after years of neglect of vaccination, an epidemic swept away nearly 50,000 persons, a large percentage of whom were children under ten years of age.

"In the United States, well-vaccinated communities show low smallpox rates—Maryland with 0.1 case per thousand population; New York with 0.025 per thousand, and the District of Columbia with 0.14 per thousand. Poorly-vaccinated States tell another story: Oregon with 1.45; Washington with 1.72; and Kansas with 2.0 per thousand population.

"Some communities wait till an epidemic breaks out and then rush to vaccinate. This stops the disease—after it has caused many deaths and has "branded" many survivors. Sixteen months ago, in Kansas City, an epidemic of smallpox began, yielding 350 cases and 123 deaths; and a few months later another started in Denver and yielded 950 cases and 288 deaths. Such epidemics always eradicate the opposition to vaccination in the community—for a time."

[*Concluded from page 468.*]

to direct his careful attention to an article appearing on pages 477 and following of this issue of the Journal, in which the treatment of urate calculi is advocated by means of therapeutic immunization—in short, by the administration of an autogenous bacterin containing fairly large doses of staphylococcus albus and bacillus coli.

To treat "kidney stone" and, also, gout with bacterins, must necessarily arouse the indignant ridicule of our DeKruifs as much as did that broken-leg business. Still, wait a minute. If you will read the raisonnement offered by Doctor Crofton, who is an immunizator of note and knows what he is talking about, it will become evident that the idea is by no means absurd. Who knows but, even in the case of broken legs, bacterins actually may prove of service. Surely, they are urgently required (or, at least antitoxins—which are likewise bacterial derivatives, in a round-about way) in cases of open fractures, when these have been acquired in contaminated places.

So, come to think of it, our critic has not shown us up so very badly; our crimes are not so terrible. In fact, they are not crimes at all but actions based on good sense.

MALARIA INCREASE IN THE FAR EAST

A great shortage of quinine in the Russian Caucasus and Armenia and a consequent alarming increase of malaria fever are re-

ported in dispatches to Near East Relief headquarters in New York.

H. C. Jaquith, overseas director of relief operations, urged that a large shipment of quinine be sent at once stating that ten thousand kilos were needed in the republic of Georgia alone and that the government has been able to provide only a small fraction of the amount necessary. Many of the people, he said, were able to pay the cost of the quinine, but it was not obtainable at any price.

DEFICIENT DIET AND CARE OF MOUNTAIN CHILDREN

Corn bread and sorghum, dried beans, fat salt "middlings" and, as a redeeming feature, usually milk—for a large part of the year: this is the diet of Southern mountain children in a district where the Children's Bureau of the U. S. Department of Labor has made a survey of child care and nutrition. The survey was undertaken at the request of the Kentucky State Board of Health to help find "why a State famous the world over for its prosperity should turn out so large a percentage of physically defective men as the draft records showed," and its findings have just been published under the title, "The Nutrition and Care of Children in a Mountain County of Kentucky." According to the report, only 16 percent of the children studied belonged to families which were clearly "able to provide the modest requirements of adequate living." Nearly half the children were living in homes in which the family income, taking into consideration the number of acres cultivated, the quality of the soil, the amount of stock, and the wages earned by the head of the family from work at trades or for other farmers, was so small as to make a minimum standard of care appear impossible. A large number lived in board sheds, small new shanties, or old log cabins in bad repair, where the cold in winter made habits of cleanliness almost out of the question, and only about one-fourth of the children were found to have clothing which could furnish adequate protection from the weather.

Many of the children having a diet which consisted largely of milk and unbolted corn meal were found, on examination, to be well nourished, but the other foods available in the community so failed to supply the essentials of growth that undernourishment frequently resulted when the quantity of milk was small. Three-fourths of the children examined were classified as either poorly or only fairly well nourished and this classification corresponded closely to the grades of diet which they were found to be receiving. Except in a few families, the use of fresh vegetables and fruit was limited to a short period in the summer and fall and the use of fresh lean meat to an even shorter period. A small number of eggs were produced, but these were sold to secure ready cash, and milk (the report states) was thus the only food that could be counted on to any extent to furnish the protein, minerals, and vitamines needed for children's growth. When milk is lacking, decreased in amount, or changed to skim milk or buttermilk, the effect in this district is declared to be "disastrous."

Physical examinations of the children were made by a Children's Bureau physician with the "Child Welfare Special"—a motor truck built and equipped for such examinations. Four-fifths of the children did not own a toothbrush, and the examination showed that 91 out of 104 of those from 6 to 11 years of age had decayed teeth. Fifty percent of all the children examined had enlarged or diseased tonsils and many had adenoids. Still other defects indicating lack of early attention were found.

The need of soil improvement is pointed out in the report and employment of a full-time county agricultural agent and of a home demonstration agent or nutrition specialist, to encourage raising and preserving more vegetables and greater utilization of milk, eggs, blackberries, unshelled beans, and other available foods, is recommended. While it is declared that higher standards of living would follow improvement of the soil and of farming methods, education of the mothers in regard to the special requirements of children is also said to be necessary. The giving of solid food to infants at too early an age, coffee drinking by children when milk is scarce, and promiscuous eating between meals were among the common customs found. The need of more sleep for children than for adults was generally ignored. The services of a county public health nurse and instruction in diet and hygiene through the public schools are means suggested for education in health and child care.

PUS TUBE—ITS COMBINED HIGH-FREQUENCY AND VACCINE TREATMENT

The complication of a chronic ovarian inflammation with a pus tube and uterine congestion with adhesions is a common picture which the physician is called upon to treat.

The case in question, which prompted this article, was that of a lady of about 37 years and who had been a nurse before marriage. She has a child, nine years of age. Since its birth, the mother had not been well, due to a subinvoluted uterus. This resulted in a continual discharge and gradual infection of the tubes and ovaries.

When called to see the lady, I found her in bed suffering with severe pain in the ovarian region on the left side, associated with chills and fever. I prescribed the indicated remedies, such as aconite, bryonia and echinacea, and, locally tampons of ichthyol, 10-percent in glycerine; also daily antiseptic douches. She also was given, hypodermically, a modified "Van Cott" vaccine, containing streptococcus pyogenes, pneumococcus, staphylococcus pyogenes aureus and albus, and colon bacillus.

The first dose was only 2 minims, but the reaction was very severe. She had chills and fever running up to 104° and which took two weeks to subside. It was explained to the lady that it was the severe infection that caused this reaction. The next dose of vaccine was again 2 minims, but the reaction was not so severe as in the first place; so, in another week, she received 3 minims.

The pain seemed to lessen after this and the discharge was not so profuse. The vaccine was continued once a week in gradually increasing doses until she received 1 mil, without any reaction. After the sixth week, she was able to come to the office. She was advised of the necessity for the removal of the offending organs, but this she emphatically refused, as she had already refused operation, seven years previously.

She begged me to try the high-frequency treatment. This was consented to in connection with the weekly vaccine doses of 1 mil. In three months' time, she was free from any discharge, from adhesions and pus tubes, and absolutely free from pain or soreness.

The high-frequency current was given bipolar. The external pad was placed over the lower abdomen and connected to the ground terminal of the high-frequency cabinet, while the current from the Tesla was connected to a non-vacuum vaginal electrode and inserted in the vagina up to the offending painful spot. The treatment was given for half an hour daily and followed by tampons of ichthyol as already mentioned.

Although this was a surgical case, the electric treatment was given after the emphatic refusal of the lady to permit operative measures. The consequence was, that she still has those organs and, after a period of ten years, is still in good health.

This experience has been repeated on many different occasions by the writer in such desperate cases and with the same happy results.

Had the tube been occluded at its uterine attachment and, in consequence, had not been able to discharge through the uterus, the high-frequency nor any other current would only have made matters worse. One such patient appealed to the writer to try and see what electricity could do for her, saying that it helped some of her friends and that, therefore, she wished to have the treatment. I informed the lady that it would be only at her risk, which she was perfectly willing to assume. After the fourth treatment, the conditions were such that operative measures had to be resorted to.

A. S. TUCHLER.

San Francisco, Calif.

SHOE BUTTON IN THE URETHRA FOR TWENTY-ONE YEARS

Patient T. Cz., age 41 years, a business manager.

When 19 years of age, he was asked by his friends to play cards with them. While playing, was given something in a drink that put him to sleep. After awaking from this sleep, he found himself in the same room and in the same chair, only fastened to the same, but he also felt pain in his penis. After loosening himself from the chair, he went out and called a city ambulance which brought him to the hospital.

There, in the hospital, he experienced retention of the urine. Pain and swelling became more severe.

On account of his inability to pass the catheter through the urethra, he was put to sleep, in order to inspect the urethra. There was revealed a small shoe-button which was removed at once.

This removal relieved the retention of urine and, gradually, also the pain and swelling. After two weeks in the hospital, the patient was ready to work, although a continuous sensation presisted that there was something still

left in the urethra. However, after experiencing so much pain and distress, he did not desire any more investigations of his urethra, and, experiencing only occasional inconvenience, he accustomed himself gradually to conditions and did not seek further treatment.

At the age of 23 years, he got married and at present has four children. He never had any difficulty or pain during coitus and only very slight distress during micturition. Recently, however, for one year and half, he noticed some difficulty in passing urine and also some burning sensation persisting some time afterward. This inconvenience at last brought him to my office.

He also brought with him a specimen of his urine and asked me to make examination of it, in order to tell him what he has in the urethra. Of course, I explained to him, that the general appearance of his urine aroused suspicion of vesicular calculi; but, whether he had anything in urethra or not, could be explained only after making a direct examination of the urethra. On direct examination, I found the penis to be well developed and without any deformity. I could palpate a hard mass at the middle of the penis, but was unable to make a guess as to its size.

It should be stated that the history of this case was not communicated to me until just after operation.

After passing a probe into the urethra, I was sure of the pressure of a foreign body, which I took to be a retained vesical calculus.

Under a local anesthetic, I succeeded in getting a good hold of the stone with forceps, but was unable to move it to the meatus even very little. I asked the patient then to see me the next day at St. Mary of Nazareth Hospital, where, under gas anesthesia, he would be relieved of his trouble.

The next day, I discussed the problem with Dr. T. Z. Xelowski who was also of opinion that we would be able to remove the stone under local anesthesia. But he removed only broken portions from the stone and was unable to move the largest part of it.

That forced us to give gas anesthesia in order to do meatotomy of about 1 inch extending into the canal, which permitted the removal of the remaining and largest part of the stone. Two stitches of catgut were sufficient to close the wound. Patient was put to bed and went home a few hours later. The next day, he reported in my office, without any edema or pain, even swelling being unnoticeable. On the third day, he was at work.

The specimen of removed stone proved to be the nucleus of another shoe-button, which was not noticed 21 years ago, was left there and caused formation of this stone, 1 inch long and ½ inch in diameter.

The most interesting part of this case is, that it shows to what extent the human tissue is capable to stand irritation from foreign bodies and even accommodate itself to it; not giving any, or only very little, inconvenience to the patient.

FRANK LENART.

Chicago, Ill.

PREVENTION OF BLINDNESS

The eighth annual report of the National Committee for the Prevention of Blindness (130 East 22d Street, New York City), dated December 31, 1922, has come to our desk.

The function of the National Committee is, we are told, to keep abreast of the scientific advance in ophthalmological knowledge of refraction, disease and operation, and to inform the public generally in layman's language of such advance, and the ways in which such knowledge and practice may be made available to the public, together with what action, public or private, on the part of the community or private organization will provide the means for professional ophthalmological assistance.

That the task which this National Committee has set itself is accomplished to a very high degree, becomes evident on consulting the report before us and also on following *The News Letter* which is published five times a year by the Committee. Its activities are far-spread and untiring. Physicians may well keep in touch with it, not only for their own information but also for the benefit of their clients.

What Others are Doing

SYPHILIS INFECTION

If there is ever a time during a syphilis infection when the disease can be eradicated from the system and a complete cure established, it is during the first six months following the appearance of the chancre. This fact is emphasized by H. M. Greene in a very excellent discussion of the problem, read before the Seattle Urological Society, last December (*Northwest Med.*, March, 1923).

The first and most important prerequisite in the treatment of syphilis, Doctor Greene points out, is a positive diagnosis, and this should be definitely established before either local or general antisyphilitic treatment is administered. In that manner, not only will the nature of the disease be determined exactly but also it will be possible to assure the full cooperation of the patient in carrying out the prolonged and arduous treatment necessary for the eradication of the disease, even after all clinical symptoms and local manifestations have disappeared. To administer either local or general specific treatment before the material is taken for laboratory diagnosis, may render the latter futile and cloud the issue.

As to the remedy, Doctor Greene points to recent literature as proving that mercury has no direct lethal effect upon the spirochetes of syphilitic lesions. Contrariwise, after the administration of an arsphenamine preparation, even in small doses, no spirochetes can be found in either chancre or mucous patches after forty-eight hours. In fact, darkfield examinations are usually negative within twelve hours after the dose.

It may be concluded that the arsphenamines possess a greater spirocheticidal action than any other agent known to medical science. The advantage is, that the patient is rapidly rendered noninfectious for others and that his distressing symptoms are relieved promptly.

Careful observations have shown that neoarsphenamine is the safest of all arsphenamine preparations.

Doctor Greene discourages the adminstration of synergistic remedies, whether actual or alleged, and believes that the arsenicals and mercury are actually antagonistic. He employs neither mercury nor iodides and prefers not to use the arsenicals until any mercury that may have been used has been eliminated from the system.

The antagonistic action of mercury and arsenic is of importance, especially because of the fact that mercury has a selective action upon the kidneys, tending to produce a nephritis. This condition necessarily interferes with the eliminating power of the kidney and promotes eradication of waste products and other substances present in the blood that ordinarily are eliminated by the kidneys.

When arsphenamines are administered, the elimination of the arsenic through the kidneys is an essential provision. Indeed, if arsenic is not found in the urine in from fifteen to thirty minutes following an intravenous administration of an arsphenamine, it is a matter of concern, in that arsenic intoxication in some form is almost certain to follow if the administration of the drug is then continued.

Doctor Greene quotes Schamberg to the effect that: "Vigorous mercurial treatment is often responsible for arsenical intoxication, when arsphenamine and mercury are used at the same time. Large doses of both ought not to be employed synchronously." When a kidney is irritated and inflamed by a generous dose of mercury, how can it be expected to eliminate arsenic or even normal body waste products at capacity? Mercury and arsenic are antagonistic in their action and should not be used together.

As to dosage, Doctor Greene insists that the first doses of arsphenamine preparations should be small in every case, even in primary and in early secondary syphilis. This is for the purpose of avoiding untoward effect, owing to individual idiosyncrasy and to test the arsenic tolerance of the patient. While small doses are not curative, they, nevertheless, accomplish a definite result and, moreover, will render condylomas and mucous patches free of spirochetes in a short time. The doses are best increased gradually, at weekly intervals, until they have become normal for the individual in question and even more, *providing* that the elimination of the arsenic is com-

plete and the treatment is tolerated without severe or brutal reactions.

It should be realized, whenever the arsphenamines are administered, that the older preparation contains approximately 30 percent and neoarsphenamine carries about 20 percent of arsenic. A normal dose of these remedies thus contains more than enough arsenic to produce fatal acute poisoning if it be administered by the stomach as white arsenic. In view of the fact that some persons are peculiarly susceptible to arsenic, it is important to adhere to the invariable rule of administering small doses at the beginning.

THE CLINICAL USE OF THE ARSPHENAMINES

For the purpose of treatment by means of arsphenamine, H. M. Greene (*Northwest Med.*, March, 1923) suggest dividing patients into two classes:

1.—Those who are in perfect physical condition and who are able to tolerate intensive, systematic and prolonged treatment sufficient to eradicate the disease.

2.—Those who have physical defects and pathologic conditions which made an intensive and prolonged treatment more dangerous than the disease itself. Great caution should be observed in handling patients in this class; everyone is a law unto himself.

In the first class, we can place only the young and the strong without a blemish of any of the vital organs; capable of taking and assimilating large doses of the arsphenamine at frequent intervals without having severe reactions. These patients are to be selected by observation, physical examination and by trial doses of the remedy.

The first dose in every case should be small, even in the robust. By this procedure, we are able to discover those who have an idiosyncrasy for the remedy in time to avoid dangerous or disastrous reactions. The doses following are to be gradually increased until the normal dose is reached and surpassed, if there is no untoward action; providing the elimination of the arsenic is complete during the interval between each dose.

In a normal individual, it requires an amount of the remedy ten times larger than the normal dose to produce a lethal effect. In other words, if you would require at one dose, ten tubes of neoarsphenamine at 0.9 Gm. to kill a normal man weighing 60 kilos, or 120 pounds; consequently, we would be able to administer to a normal man weighing 120 pounds 0.9 neoarsphenamine each day for a week without killing him. Measures like this are dangerous and are uncalled for and are not recommended.

When the patient is in the primary or early secondary stage, Greene deems it safe to make the first dose at 0.15 or 0.30 Gm. and this dose may be repeated in five days or a week at 0.30 or 0.45 Gm., if the patient is robust. The interval between the doses following should be one week, providing the reactions are not severe and elimination of the arsenic is complete. If the arsenic is not eliminated, the dose should be postponed until the urine is free of arsenic. To do otherwise, is to court trouble. If the patient becomes arsenic-fast, so to speak, chronic arsenical intoxication will be produced in the patient before the spirochete can be eradicated by the arsphenamines and it then becomes necessary to use some other form of treatment, for a while at least.

ARSPHENAMINE TREATMENT IN COURSES

In his discussion of the intensive and systematic treatment of syphilis, to which we have already referred, Dr. H. M. Greene (*Northwest Med.*, March, 1923) recommends that eight or ten doses of arsphenamine should be given in the first course and the total amount of neoarsphenamine should be from 5 to 10 Grams. In the succeeding course, four or five doses should be administered and the total amount of neoarsphenamine should be from 2.5 to 5 Grams. No mercury or other antisyphilitic remedies should be administered in the interval between courses, and the patient should observe all the rules of hygiene.

Intensive treatment must be administered with extreme caution, the patient must be frequently observed, and the remedy must be well tolerated, otherwise it should be abandoned before it is followed by disastrous results.

We must presume from clinical observation that the spirochete passes through its reproductive cycle once in twenty-one days. The chancre usually appears in twenty-one days after exposure and in twenty-one days after the appearance of the chancre the secondary eruption begins to appear. The interval between courses of treatment should be calculated to prevent a reswarming of the spirochetes. If all the spirochetes are not killed by the first course of treatment, it is presumed that there will be a new crop in twenty-one days after all arsphenamine is out

of the blood stream.

If there are no indications otherwise and the previous course of treatment has been well supported, we make the interval between the first and second courses of treatment two months. This gives time to observe untoward action of the remedy and allow the liver, kidney, and other eliminating organs to clear themselves of the drug. At the same time, a reswarming of the spirochete will not have time to occur on account of the arsenic previously stored in the tissues. If the old forms of the spirochete become resistant to the remedy and refuse to be killed by it, then it might be required to allow them to die of old age and at the same time to keep the young ones killed off by an intermittent treatment prolonged.

PRECAUTIONS IN USING ARSPHENAMINE

To avoid chronic arsenical intoxication, Dr. H. M. Greene (*Northwest Med.*, March, 1923) mentions the following precautionary rules:

1. When intensive treatment is being administered, we must know that accumulation of the arsenic is not taking place in the patient.
2. Examine his urine for arsenic twenty to thirty minutes after the dose and see if his elimination is in progress. Examine the urine immediately before each dose for albumin, sugar, arsenic, etc.
3. Do not increase the dose, if the reactions from the former dose were severe; if the reactions were brutal, the dose should be diminished by one-half.
4. Stop with the first patchy dermatitis, or toxic erythema.
5. Stop with the appearance of an albuminuria.
6. Stop when there is any sign of hemophilia present, frequent nose bleeds, bleeding from the gums, purpuric spots, etc., and test the coagulability of the blood, and take blood pressure.
7. Do not administer when there is an acute intercurrent disease or a severe cold present.
8. Proceed with care when the weight is being reduced below standard for the individual.
9. Stop when jaundice appears and administer remedies for arsenical intoxication. A jaundice occurring early in treatment is produced by a Herxheimer reaction and will usually clear up by further administration of the remedy.
10. Be cautious with intensive treatment in patients over fifty years of age.
11. Stop with the first appearance of edema as evidenced by puffiness of the eyes or pretibial pitting on pressure.
12. Stop upon appearance of the sensation of tingling of the fingers, hands or feet.

THE TEST FOR ARSENIC

Leredde, quoted by Greene (*Northwest Med.*, Mar., 1923, p. 89), recommends the Abelin test as being practical and delicate.

For this test, four solutions are required as follows:

1. Nitrite of soda 0.5 per 100;
2. Hydrochloric acid 10. per 100;
3. Resorcine pure 1. in 10;
4. Carbonate of soda 20. per 100.

In absolutely clean test tube, put 5 Cc. of cold urine and add three or four drops of the solution of hydrochloric acid and three drops of nitrite of soda. Shake the tube and allow it to stand until all reaction ceases. Apply a drop on amylo-iod-potassic paper with a glass-rod, to see if the diazotation is terminated. If there is no nitrite of soda in excess, iodine will not be liberated from the paper. If the spot turns blue, make another test, using less nitrite solution.

In another tube, put 0.3 of resorcine (5 grains) and add about 3 Cc. of distilled water (about 50 drops, approximately 1 drachm). It is important that this solution be freshly prepared, and then add 3 Cc. of solution of sodium carbonate and shake. (Tube No. 1 should be prepared and ready for mixing with Tube No. 2. Tube No. 2 should be used as quickly as possible after the water is put in the resorcine. It browns by exposure to air.) After these two tubes are prepared, their contents should be approximately equal.

The contents of the first tube is poured into that of the second tube.

If there is arsphenamine in the urine, the resorcine in the solution is colored red; if not red, a mixture of red and brown. For comparison use a tube of plain urine without reagents.

Greene observed, in doing Jaffé's test for indican, that those urines, giving an Abelin test positive for the arsphenamines, would also give a reaction not found in those negative with the Abelin test. He believes this reaction to be a positive indication of arsenic in the urine and the test is performed in the following manner:

In a clean test tube, pour 5 Cc. of urine and add 5 Cc. of fuming hydrochloric acid, Merck, and 1 Cc. of fresh peroxide of hydrogen. Shake and add 1 Cc. of chloroform and shake vigorously. Stand the tube in the rack for 15 to 30 minutes. If arsenic is present in the urine, there will be a narrow line of deposit on top of the chloroform which will be pink in color. This color will be retained for 20 to 30 minutes or longer, in very positive cases from 12 to 24 hours. After the pink color of arsenic fades, a light yellow takes its place. The same pink line will be observed in urines, where no arsenic has been administered, but it is decolorized rapidly and does not remain longer than 10 to 15 minutes.

If iodides are present, the chloroform and entire mixture will be pink but will fade and leave a pink line on top of the chloroform, if

arsenic be present.

In one case, where the Abelin test was negative and the last test above explained was positive and was disregarded on account of the extreme condition of the patient, a severe dermatitis was the result of the continued administration of neoarsphenamine. This dermatitis was most severe and resisted all forms of treatment over a period of two months. An accident like this is most disagreeable and dangerous for the patient and distressing for the doctor as well. Every precaution should be used to safeguard the patient when a powerful and poisonous drug like arsenic is to be administered over a sufficient length of time to eradicate a syphilis. Arsenical intoxication is easier to avoid than it is to cure.

TREATMENT FOR NEUROSYPHILIS

Dr. Mariano Alurralde presents an excellent article on the subject of the title (*La Prensa Medica Argentina*), summarizing his conclusions as follows:

Clinical manifestations of neurosyphilis appear earlier in patients treated exclusively with arsenobenzol.

Lumbar puncture is indicated when neurosyphilis cannot be distinguished from tabes and paresis.

No form of neurosyphilis is to be considered as cured as long as meningeal involvement is present.

Mercurial treatment should precede the use of arsenobenzols. [Compare p. 533.—Ed.]

Meningeal or neural relapses are more serious in early neurosyphilis.

Arsenic is more active than mercury, but it should be always handled with prudence.

Arsenobenzol therapy must not be an exclusive treatment. It is contraindicated or must be used with great care in certain mental forms or congestive types of neurosyphilis.

The more advanced the cases of tabes, the smaller should be the doses.

Where meningeal involvement is indicated and the probabilities are that general paralysis will follow, specific treatment should invariably be given.

In general paralysis, medication is contraindicated or requires the greatest prudence.

Intraspinal arsenobenzol therapy is indicated in rebellious syphilis or in mercury- or arsenic-resistant patients.

A long period of observation is required before neurosyphilis can be considered as cured; and, then only when a Wassermann test of the spinal fluid is negative.

NEUROSES AND THE CHRONIC INVALID

Says Hugh T. Patrick, in part (*Wisc. Med. Jour.*, Feb., 1923): "Probably few of us realize how artificial our living is; that from the cradle to the grave life is a constant conflict between what we instinctively should like to do and what society bids us do. Very early, the normal child learns that certain perfectly natural functions may not be performed in a completely natural way. He may not micturate in the living room, take a handful of sugar from the bowl, nor strike his little sister. The ten commandments are edicts against what we would do if unrestrained. All laws, ordinances, taboos and social conventions are the same. Our instincts and natural desires are increasingly controlled and repressed; we are constantly trained and pruned and directed for society's good. Some of us stand it pretty well; adapt ourselves as well as the majority, and an indulgent public calls us normal. Some of us can't, or don't, make the adjustment, and we then are the unhappy, the unsuccessful, the ill; the criminals, the insane; the tramps, the paupers, the cranks; the dwellers in sanatoriums and hospitals, the misfits, the chronic invalids.

"Of a certain number of men in trouble, that is, in a difficult, painful, perplexing or intolerable situation, one deliberately runs away, one unconsciously runs away (ambulatory automatism; the 'amnesia' of the newspapers), one gets drunk, one prays, one falls into 'nervous prostration,' one gets intractable dyspepsia, one becomes intolerably irritable and irascible, another resorts to deception and chicanery, and some are able manfully to struggle through the difficulty to success or honorable defeat. Now, the 'nervous prostration' and dyspepsia really are behavior reactions to the situation just as are the running away, the resort to prayer or alcohol. Instead of 'nervous prostration,' the reaction might be headache, backache, insomnia, a feeling of general weakness, palpitation, phobias, tics, dizziness, convulsive attacks, functional paralysis, eye strain, etc. And if these things last long, behold the chronic invalid. In fact, chronic invalidism from physical disability alone is not so very frequent.

"A strikingly lucid exposition of the neuroses we got during the war. A large body of men picked as normal in civil life was sent to military camps for training. Some of them could not make the adjustment and fell ill with neuroses. That is to say, the situation with all

it involved, present and future, was intolerable. They did not and could not fit in. The neurosis was a way of escape. In various camps in this country, I saw typical cases of 'shell shock' in men who had never even heard a machine gun. Other men 'broke' only when they got to the training camps in France, others were normal until they got just back of the firing line, and still others were all right until among bursting shells and slaughter, when they escaped by way of the war neuroses which had saved their less stable fellows in the peaceful camps of the United States. In short, neurosis was a most disagreeable means of escape from something infinitely more distressing.

"Now we have the post-war neuroses, and some of those mean chronic invalidism. The principle is exactly that of the more acute cases. The man back from the service finds a situation which for him is intolerable or unbearably trying. He just can't meet it. To live the rest of his life a chronic invalid is far from ideal, but on the whole it is preferable to what he otherwise would have to do.

"The war and post-bellum neuroses are good illustrations because they are relatively simple. In the more complex neuroses of civil life, the principle is the same.

"The big questions are, what can we do and what shall we do with the chronic nervous invalid? Time restriction allows me to present only a few indications and comments. They sound like truisms, but are too infrequently followed:

"1. An accurate diagnosis. Unfortunately, this often requires not only an adequate conception of the nature of a neurosis, but also painstaking, patient, bold, even exhaustive investigation of all the influences inducing behavior anomalies.

"2. A neurosis being the result of maladaptation, obviously appropriate treatment means an intelligent effort to mould the patient to fit his environment or change the environment to fit the patient, or both. This sounds formidable, and often it is. Sometimes it is impossible; as impossible as it is to restore an old fibroid lung or an ancient small granular kidney, or to fit a primeval savage into modern civilization, or to carry an imbecile along with his class in school. But sometimes it is ridiculously easy.

"3. The technic is not a matter of routine but of individualization. The management of a neurosis always means the management of the individual. Sometimes, though rarely, the simplest suggestion suffices. Sometimes the suggestion must be more elaborate. Some patients are best managed by the 'persuasion' of Dubois. For some, quite elaborate explanation and exposition are necessary. Once I got a man started right by giving him a brutal smack in the face. It is amazing how many neuroses are based on fear; a fear unrecognized or only vaguely felt. Naturally, the fear must first be uncovered and clearly defined and the regeneration of a coward must be accomplished in accord with the personality of the patient. Sometimes cure means prolonged reeducation and training, with many relapses and backslidings. A fruitful occupation in which the patient can be really interested is the logical medicine for many.

"4. In conclusion, and to repeat, we must 'make the punishment fit the crime.' A neurosis is a mental disorder, a behavior reaction, and must be treated in accord with its nature. Who would give asafetida or valerian to cure a hobo from tramping? Did anyone ever suggest strychnia or Dr. Bunkem's Iodophosphatic Tonic to cure the pathological liar? Is the rest cure a good measure against prostitution, removal of the ovaries a cure for holy rolling and change of scene a panacea for inebriety? If a man tries to be a Napoleon of finance and fails, do we advise massage and stimulating baths? If he has hypochondria or simply a champagne appetite and a beer pocketbook, do we remove his appendix, straighten his septum, drain his gall-bladder and, finally, give him bromide? I am sorry to say sometimes we do. But we shouldn't."

HUMAN INFECTION WITH SARCOPTIC MANGE OF DOG

Dr. Arthur Whitfield, physician to the Skin Department, Kings College, London, reports, in the *Veterinary Journal*, several cases of human infection with *sarcoptes canis*. From an experience of about fifty cases that have occurred from intimate association with the infected dogs, Dr. Whitfield concludes:

"To put it in familiar terms, I may describe it as like a very minute chicken-pox lesion. The seed-like vesicles so common in human scabies are rarely if ever present, and eczematization and secondary pus infection, impetigo, pyogenic folliculitis, etc., are not present as a rule. Speaking generally, the eruption is far more like an exanthem than an externally produced eruption. Three rubbings of sulphur ointment cause the rapid disappearance of all the symptoms."

Among the Books

TURRELL: "ELECTROTHERAPY"

The principles of Electrotherapy and Their Practical Application. By W. J. Turrell, M. A., D. M., etc. London: Henry Frowde and Hodder & Stoughton. 1922. Price $3.85.

Here is another volume of the "Oxford Medical Publications," in which the author makes an attempt to explain the therapeutic action of electricity upon rational grounds and upon physiological principles. The text may be divided into four parts of unequal lengths, in the first of which current electricity is discussed. The therapeutic action of static electricity is considered, because it is mainly the currents derived from the static machine and not the static charge itself which possesses therapeutic action.

The second part is devoted to an explanation of the therapeutic action of radiant energy. Here the author refers to the recent work of the Erlangen gynecologists, Seitz and Wintz, who warn against the custom of employing prophylactic radiation, in the amount of forty percent of the unit-skin-dose, before operation. This, they claim, is more apt to stimulate than to destroy cancer cells.

The third part is concerned with electrodiagnosis. The chief portion, dealing with the electrical diagnosis of peripheral nerve lesions, has already appeared in the *American Journal of Electrotherapeutics*. A chapter on the electro-diagnosis of certain diseases has been added.

The fourth part explains the action of electrotherapy in some of the diseased conditions for which it is applied and indications are given of the type of case suitable for electrical treatment. To this part, some practical hints on treatment are added.

METZGER: "X-RAY TECHNIC"

Principles and Practice of X-Ray Technic for Diagnosis. By John A. Metzger, M. D. Illustrated. St. Louis: The C. V. Mosby Company. 1922. Price $2.75.

This small volume, with its numerous splendid photographic illustrations and clear, matter-of-fact text, constitutes an excellent guide for the diagnostic use of x-rays. It will be welcomed by many, beginners and advanced students of this branch of electrotherapy.

BISHOP: "ELECTROCARDIOGRAM

Key to the Electrocardiogram. By Louis Faugeres Bishop, M. A., M. D. Illustrated. New York: William Wood Company. 1923. Price $3.00.

Despite its somewhat forbidding title, this book is presented to the general practitioner rather than to the high-brow investigator. Fortunately, the author's persuasive ratiocination and his lucid descriptions contribute to making both, title and subject, far less formidable than they seem at first, and he shows that there is nothing mystical or hopelessly complicated about electrocardiography. "It is easy to learn and interpret and requires common sense far more than technical knowledge;" moreover, "the understanding of electrocardiograms is the criterion of modern, sensible, accurate handling of a patient, as compared to the slipshod casual, though doubtless well-meaning ways of the past."

Whether the individual practitioner can apply cardiography in his daily work or whether it is only for the better understanding of modern medical literature—in either case, he should study this book with care.

THOMAS: "THE SUCCESSFUL PHYSICIAN"

The Successful Physician. By Verlin G. Thomas, M. D. Philadelphia: W. B. Saunders Company. 1923. Price $4.00.

This book is intended as a guide book, "showing the way and helping the traveler to keep on the right road. For, he who keeps on the highways and follows the road signs reaches the end of the journey quickly and easily. He avoids the bumps and the detours; he saves expense and worry, and, when the trip is over, he is happy and contented."

While the book before us "can not make the blunderer efficient or make the misfit fit, it can and will, if read carefully and followed wisely, help to avoid the error that others have made."

All these remarks are exerpted from the preface and indicate the trend of the book. No doubt, they will satisfy the ambitions of nine hundred and ninety-nine out of a thousand young graduates in medicine, and it is

barely one out of a thousand who will not object to detours and byways; who rather will seek them and enjoy meandering through the beautiful paths that are not trodden by the many, browsing in pastures that afford food palatable only to the highly discerning. These few do not care to reach the end of the journey "quickly and easily;" they like to loiter by the wayside.

However, the few usually are free-lances, anyway, and are exceedingly prone to fail in the ordinary philistine pursuits. It is for the many that the book is very properly written; it is they who will derive guidance and sound counsel from its pages. It is to be kept in mind that the author does not teach medicine. That, he postulates as a condition. He rather deals with the business phases and with the various things outside of strictly-medical teachings; matters that are not usually taught in college, that many physicians have to learn through bitter experience and that many more never acquire at all.

Books of this sort have appeared before now. We naturally think of Cathell's "The Book on the Physician Himself." Older men or those who like to pay occasional visits to second-hand bookstores will be familiar with James Jackson's "Letters to a Young Physician Just Entering Upon Practice" (1856, *et ante*). The historical student probably has encountered Benjamin Rush's address to one of his graduating classes, which may be found in one of the volumes (the third?) containing his "Medical Inquiries and Observations."

No doubt, Doctor Thomas' teachings are sound and, if followed conscientiously, will lead to success. Still, we do not always or in everything agree with him. While it is perfectly true that, "To cease your medical studies the day you complete your state examination for the right to practice is professional and business suicide," and while, indeed, "A man is usually interested in that form of work in which he is most proficient" (implying the advice that the medical man will do everything to make himself proficient in as many branches of medical art and sciences as possible)—we are tempted to dispute the author's suggestion that the physician should always be busy at some task or activity connected in some manner with his profession. He claims that nothing destroys the esteem of people for a doctor more quickly than to see him occupied with something that is of no value to him in his profession, or to find him in the companionship of idlers.

The companionship of idlers should be eschewed quite unhesitatingly. However, it is not only permissible but even desirable to develop and to foster some sort of a relaxation-occupation, a hobby, something in which he can forget, for an hour or two, the strain of his professional duty. Indeed, in one chapter, the author himself advocates and recommends hobbies *and* regular vacations.

Among the problems regarding which good and well-meant advice is given, we mention the following: "Office Systems and Accounts"; "The Doctor and His Investments"; "The Physician and the Law"; "Ethics"; "Insurance"; "Vacations and Hobbies".

BAYLISS: "THE COLLOIDAL STATE"

The Colloidal State in its Medical and Physiological Aspects. By Sir William M. Bayliss, F. R. S. London: Henry Frowde and Hodder & Stoughton. 1923. Price $2.15.

This recent representative of "The Oxford Medical Publications" will be welcomed by most physicians. It is offered as an attempt to give a short account of the properties of colloids so far as they are of interest in connection with the phenomena occurring in living beings.

While the discussion is necessarily largely theoretical and technical, the colloids have become so well established among our remedial agents as to make it desirable that we possess some understanding of their nature. To procure this, Doctor Bayliss' little book offers an acceptable means.

TIDY: "SYNOPSIS OF MEDICINE"

A Synopsis of Medicine. By Henry Letheby Tidy. Third Edition, Revised and Enlarged. New York: William Wood and Company. 1923. Price $6.00.

The preceding edition of this serviceable reference book was announced in this journal in 1921 (March issue, p. 204). The present edition contains several new articles, for intance, those on barbital (veronal) poisoning, cocaine poisoning, Vincent's angina, cyclical vomiting, celiac disease and sprue; also on the physiology of digestion, on the sensory and motor tracts, and on the tests of renal efficiency, a subject in which much valuable research has been carried out lately.

We have little to add to our appreciative remarks contained in the earlier review except to confirm them. Almost constant consultation of the volume, for rapid reference, has proved it to be an exceedingly valuable constituent of those few books that form our *desk* library.

THE INSTITUTION QUARTERLY

The Institution Quarterly is issued by the Department of Public Welfare of Illinois; to reflect the public charity and penal service of Illinois; to publish the results of its investigations and research in the manifold questions of care and treatment of all classes of state wards and to lead the way towards a harmonious cooperation and coordination of all public and private agencies throughout Illinois, which at any point touch the problems of philanthropy, charity and social betterment. Editor H. Lawrence H. Becherer, Superintendent of Charities. Springfield, Illinois.

This periodical contains a surprising amount of useful information which is of service not only to physicians as physicians but also from a socioeconomic, civic, criminologic aspect. We are thinking, for instance, of several articles dealing with occupational therapy, with the efforts that are made to help former inmates of state institutions to "come back" and the many other suggestive and helpful contributions to his particular number which is a splendid example of what the *Quarterly* represents.

PEKING UNION MEDICAL COLLEGE

Addresses and Papers, Dedication Ceremonies and Medical Conference Peking Union Medical College. September 15-22, 1921. Peking, China, 1922.

The inauguration and dedication of Peking Union Medical College are commemorated in this handsome and interesting volume. The text is introduced by a history and description of the college, after which there follows an account of the dedication ceremonies. During the conference and following it, numerous addresses and papers were presented, clinics were held and interesting cases demonstrated. All of these are reported in the 416 pages of the book which is copiously illustrated.

"JOURNAL OF INTRAVENOUS THERAPY"

The *Journal of Intravenous Therapy* devoted to Pharmacology and Therapeutics of Intravenous Medication is published by New York Intravenous Laboratory and contains original articles, reprints and abstracts from domestic and foreign medical journals, including laboratory and clinical reports on intravenous medication. The latest issue (March, Vol. 2, No. 1) contains, in addition to editorial articles and abstracts, a reprinted article from the *Medical Times* on "A Plea for Intravenous Therapy Based on Over Two Thousand Injections and Three Years of Practical Experience," by William J. Hall. There is an article on "The Gravity Versus the Syringe Method." Another deals with "The Treatment of Gonorrheal Epididymitis." Then there is a title "Can Quinine Be Administered Intravenously?"; and one "Clinical Results Obtained by the Intravenous Injection of Hexamethylenamine."

While this editorial writer personally is not greatly enamored of intravenous therapy, being convinced that he can get as prompt and complete absorption into the circulation and, therefore, as good clinical results from intramuscular injections, he realizes that numerous physicians have become "sold" on the idea. To them, this *Journal of Intravenous Therapy* will undoubtedly afford many important and valuable suggestions. We believe that the journal can be procured by addressing the New York Intravenous Laboratory, 100 W. 21st St., New York City.

THE ACADEMY OF ARYAN SCIENCE DIARY

Calendar (With Diary combined) for 1923 of the Academy of Aryan Science. Tiruvendipuram P. O. South Arcot District. Madras Presidency, S. India. Established 1917. Incorporated with International Academic Union, Washington, United States of America, as an Academic Member. Printed at The Arya Kala Press, 7 Genguraman St., P. T., Madras 1922.

The Aryan Press has issued a little calendar and pocket diary of which a copy has just come to us. The text is interspersed with quotations from the Ayarvedas.

DOBELL AND O'CONNOR: "INTESTINAL PROTOZOA"

The Intestinal Protozoa of Man. By Clifford Dobell and F. W. O'Connor. Published for the Medical Research Council by John Bale, Sons & Danielsson, Ltd., London. 1921. Price 15/s. ($3.75.)

We are informed that, originally, this book was to have been written jointly, by a zoologist and a medical man, in consideration of the fact that the subject touches upon the two fields of zoology and medicine. Circumstances threw an unintended proportion of the work upon the zoologist author. The subject is one possessing special interest for laboratory, technicians and for physicians who see many cases of tropical diseases.